University of Alberta

The Impact of a Psycho-Educational Program on Clients' Symptoms and Health-Related Hardiness

by

Cheryl Lynette Webster

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfilment of the requirements for the degree of Master of Nursing

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Abstract

In the health literature, an individual's ability to resist illness when under stress has been referred to as "hardiness". Resources which may be categorized by two broad domains, "control" and "commitment and challenge", may be used by individuals to sustain a sense of wellbeing. In this research, a quasi-experimental nonequivalent control group design was used to determine the impact of a specific clinical nursing intervention (The Wellness Program) in terms of its usefulness in fostering the development of thoughts, feelings and behaviours associated with health-related hardiness. The sample consisted of 5 treatment group subjects and 5 control group subjects. Findings demonstrated a significant reduction in symptoms related to obsessive compulsiveness, hostility, psychoticism and average level of distress after subjects completed a relatively short psycho-educational health promotion group. Subjectively, the treatment group subjects also described positive changes in thoughts, feelings and behaviours. This research has implications for clinical interventions using small groups to promote health despite the limitations set by the necessity of small sample size.

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Chapter 1

INTRODUCTION

Health-Related Hardiness refers to "ego resources necessary to appraise, interpret, and respond to health stressors" (Pollock, 1989, p.55). These health stressors may represent physical, emotional, mental, social and/or spiritual issues. The term "health" as it is used in this study refers to more than just the absence of disease. Health represents an achievable state of personal physical, emotional, mental, social and spiritual balance. As difficulties arise for individuals they utilize resources associated with Health-Related Hardiness to maintain their own sense of well-being and balance.

The number of published investigations and critiques of hardiness research attest to the growing interest and information about this construct. All of the health-related hardiness information suggests that particular behaviours and attitudes may predispose some people to think and act in a "hardy" way, thereby enabling personal development and growth. However, the concept of using clinical interventions to promote health-related hardiness behaviours and attitudes remains virtually unexplored. Developing and evaluating clinical interventions promoting Health-Related Hardiness is warranted by the need for substantive information about means of facilitating hardy behaviours and attitudes. The

current systemic changes in the Albertan Health Care System which are impacting traditional treatment modalities provide evidence of the timeliness of such studies.

The focus of this study was to explore the impact of specific clinical nursing intervention strategy in terms of its usefulness in fostering the development of thoughts, feelings and behaviours associated with health-related hardiness. The specific intervention under scrutiny was the Wellness Program - A Program on the Basic Issues Affecting Health.

The Wellness Program

The clinical nursing intervention chosen for this study was a psycho-educational program entitled: Wellness Program - A Program on the Basic Issues Affecting Health. Psycho-educational interventions have been defined by Kinney as

> typically a series of didactic presentations that follow a structured lesson plan which provides information on and facilitates insight ... in order to develop more adaptive perceptions/feelings, behaviour, and communication" (1985 p. 47).

The Wellness Program is a psycho- educational program which lends itself to the study of promoting health-related hardiness for several reasons: 1) those individuals who participated in the program identified themselves as experiencing

stress which effected their health; 2) the Wellness Program is a closed group and the participants represented an identifiable cohort; and 3) the Wellness program has identifiable goals which are congruent with the domains of health-related hardiness.

The Wellness Program consists of nine semi-structured group sessions which take place over a five month period. The program is based on the belief that every person is unique and has innate skills and abilities which are modifiable through the process of change. The Wellness Program has three primary goals. These are: 1) to assist individuals to respond to the challenge of change; 2) to assist individuals to assume control of stress in their lives; and 3) to assist individuals in developing a strong sense of purpose and direction in life and the commitment to exercise these beliefs. The psycho-educational content of the program was developed by Gail Baumbach R.N., BSc(N), M.S.N., CDE and Cheryl Webster Psych.Nurs., R.N. BScN.

Purpose and Rationale of the Study

The purpose of this study was to explore the impact of a psycho-educational health promotion program in which the focus was the appraisal, interpretation and response to health stressors. This program was the "Wellness Program: A Program on the Basic Life Issues Affecting Health".

Based on the following rationale this research project was undertaken. Foremost, findings from this research may contribute to our understanding of the potential clinical nursing interventions which may foster the development of thoughts, feelings and behaviours associated with health-related hardiness. For example, this research project is an opportunity to explore whether significant change occurs, and can be measured, using a relatively brief clinical intervention with a small sample size. Subsequently, a further rationale for this study is that the results can serve as baseline data for a more longitudinal health-related hardiness research project. Furthermore, knowledge about the impact of the Wellness Program can provide vital information which would be beneficial to the development of more effective community based health promotion programs.

These specific questions were addressed:

1) Does a psycho-educational health promotion program change the way individuals view important issues related to their health?

2) Does a psycho-educational health promotion program change the number of self-identified psychological symptoms of an individual?

3) What changes do individuals identify in thoughts, feelings and behaviours following a psycho-educational health promotion program?

4) Does a psycho-educational health promotion program influence the number of difficult life circumstances as measured?

Chapter 2

LITERATURE REVIEW

This literature review was conducted using the stages of an integrative literature review suggested by Ganong (1987). The primary goal was a synthesis of separate findings into a coherent whole in which the salient issues related to the use of hardiness and health-related hardiness as outcome measures were summarized. The following computerized data bases: MEDLINE, HEALTH, CINAHL, ERIC, and PSYCHLIT were utilized. Articles were reviewed in the context of their relevance to stress-illness relationship, hardiness and health-related hardiness.

Stress-Illness Relationship

Within the past few decades, there has been a considerable amount of work done in the area of stress. Many researchers have focused their efforts specifically on the linkages between stress and physical well-being, in an effort to postulate the variables related to this phenomena (Antonovsky, 1979; Antonovsky, 1990; Bandura, 1982; Benson, Beary, & Carol, 1974; Bigbee, 1987; Burns, 1980; Davis, 1991; Jennings & Staggers, 1994; Kobasa, 1979; Kobasa, 1982; Kobasa, 1990; Kobasa, Maddi, & Kahn, 1982; Kobasa, Maddi, Puccetti, & Zola, 1985; Lambert & Lambert, 1987; Lazarus & Folkman, 1984; Ornstein & Swencionis, 1990;

Pollock, 1989; Seligman, 1990; Sullivan, 1993; Tartasky, 1993). As a result of this research, physical well-being has been increasingly seen as determined by a multitude of physiological, behavioural, and social conditions (Kabat-Zinn, 1982; Kobasa, Maddi & Kahn, 1982; Lorig, Laurin & Holman, 1984; Morse & Johnson, 1991; O'Leary, 1985; Pollock, 1984; Schwartz, Stater & Birchler, 1994; Vickery, Golaszewski, Wright, & Kalmer, 1988). For example, several researchers have identified that many clients request out-patient services (emergency and physicians' offices) for the treatment of physical complaints which are related to psychosocial factors (Hellman, Budd, Borysenko, McClelland, & Benson, 1990; Kobasa, Maddi, & Kahn, 1982; Pennebaker & Beall, 1986; Pollock, 1989). It is postulated that many of these health care consumers have particular behavioural and attitudinal styles that influence their health care choices (Hellman et al., 1990; Kobasa, 1979; Pollock, 1989). Approaching these individuals using a strict disease model to structure treatment is costly, ineffective, and often frustrating for the client and the clinician (Hellman et al., 1990; Mumford, Schlesinger, Glass, Patrick, & Cuerdon, 1984; Smith, Monson, & Ray, 1986; Vickery, 1986; Vickery, Kalmer, Lowry, Constantine, Wright, & Loren, 1983).

Research efforts in the areas of stress, illness, health, behavioural, and attitudinal styles have produced an evolution from the traditional cause and effect

model to a multidimensional process - orientated stress model (Lazarus & Folkman, 1984). The latter depicts variables (which include causal antecedents, mediating attributes, and immediate and long-term consequences) that are social, physiological, and psychological in nature. As variables related to the stress-illness relationship were further developed, hardiness and health-related hardiness emerged. At present, these two variables have been a focus, almost exclusively, of the disciplines of Psychology and Nursing.

Hardiness

Social Psychology and Nursing researchers have attempted to explicate the relationships between and among the sources of stress, illness and the phenomena of hardiness. Kobasa, Maddi, Puccetti and Zola (1985) have defined hardiness as "a constellation of three crucial personality characteristics - commitment, control, and challenge" (p. 392). It has been hypothesized that these personality characteristics enable individuals to remain healthy when they try to cope with stressful life events or stressful situations (Pollock, 1989). Furthermore, it is generally believed that hardiness consists of a cluster of personality characteristics that are motivating factors used by individuals as they adapt to actual and potential health problems (Bigbee, 1985; Davis, 1991; Jennings & Staggers, 1994; Kobasa, 1979; Kobasa, Maddi, & Kahn, 1982; Lambert & Lambert, 1987; Lindsey & Hills,

1992; Miller, 1992; Nicholas, 1993; Nowack, 1986; Nowack, 1989; Pollock, 1984; Pollock, 1986; Pollock, 1989; Pollock, Christian, & Sands, 1990; Pollock & Duffy, 1990; Ross, 1991; Sullivan, 1993; Tartasky, 1993).

A variety of terms have been used to describe the phenomena of hardiness. These include terms such as: stress moderator (Kobasa & Puccetti, 1983), mediator (Kobasa, Maddi, & Courington, 1981), buffer (Kobasa, Maddi, Puccetti, & Zola, 1985), resistance resource (Kobasa, Maddi, & Kahn, 1982), and health-related hardiness (Pollock, 1989). Through the use of the aforementioned terms, researchers have attempted to distinguish individuals who remain healthy (physically and emotionally) when experiencing high levels of stress from those who become ill. As researchers strove to capture their interpretations of hardiness, they have used an existing test in their studies for example: The Composite Hardiness Score (Kobasa, Maddi, & Kahn, 1982), The 20 Item Abridged Hardiness Scale, (cited in Allred & smith, 1989), or The 36 Item Revised Hardiness Scale (cited in Allred & Smith, 1989). If the researchers found these tests to be unsuitable they designed "new hardiness" tests for their studies. These "new hardiness" tests include The 30 Item Cognitive Hardiness Scale (Nowack, 1989) and The Health-Related Hardiness Scale (Pollock, 1986).

Researchers have conducted studies primarily to identify attributes of

hardiness that promote physiological and psychological adaptation to illness. Subsequently they have suggested the variability in adaptation to both actual and potential health problems may be a consequence of hardiness. The original research studies investigating hardiness are in the area of male executive coping with high stress levels (Kobasa, 1979; Kobasa, Maddi, & Kahn, 1982). In many of the subsequent research studies Kobasa's work has been used as a guide (Bigbee, 1985; Davis, 1991; Jennings & Staggers, 1994; Lambert & Lambert, 1987; Lindsey & Hills, 1992; Miller, 1992; Nicholas, 1993; Nowack, 1986; Nowack, 1989; Pollock, 1984; Pollock, 1986; Pollock, 1989; Pollock, Christian, & Sands, 1990; Pollock & Duffy, 1990; Ross, 1991; Sullivan, 1993; Tartasky, 1993). This guidance is usually apparent in either one of two ways: (a) how they begin to conceptualize hardiness, or (b) how they attempt to measure it. In all of the studies empirical referents to hardiness are developed that relate to thoughts, feelings and behaviour. There have been no attempts made to determine whether or not hardiness is related to the level of difficult life circumstances. Difficult life circumstances may include: regular arguments with a life partner, long-term debts, unemployment, problems with neighbours, problems with alcohol or drugs, victimization, and experiencing abuse (sexual, physical, and/or emotional).

Hardiness has also been a salient concept in the health promotion literature.

In the health promotion literature a eudaemonistic conceptualization of health is often used which has impacted the clinical attempts to facilitate/promote/foster individual hardiness. For example, Watson (1987) refers to health as the "unity and harmony within the mind, body, and soul. Health is also associated with the degree of congruence between the self as perceived and the self as experienced" (p. 226). Inherent to these beliefs is the axiom that everyone is capable of contributing to their own health and healing. Therefore, everyone has the potential to experience thoughts, feelings and behaviours congruent with high levels of hardiness.

Bigbee (1987) discusses the health-promoting potential of hardiness as it increases an individual's protection against disease in the presence of stress. This research has been supported by Kobasa (1979), Kobasa and colleagues (1982), and Pollock (1989). In several other studies it is suggested that it is possible for individuals to further develop and refine their own hardiness characteristics which would be evident via reported changes in thoughts, feelings and behaviour (Bigbee, 1987; Lambert & Lambert, 1987; Lindsey & Hills, 1992; Nicholas, 1993; Pollock, 1989). Nurses have primarily focused on hardiness when their subjects have been patients diagnosed with a chronic illness (Bigbee, 1987; Nicholas, 1993; Pollock, 1986; Pollock, Christian, & Sands, 1990; Ross, 1991) or when working on the

prevention of nurse burnout (Lambert & Lambert, 1987; Rich & Rich, 1987; Wolf, 1990). Specific clinical intervention strategies have not yet been evaluated in terms of their ability to foster personal hardiness.

Hardiness as evaluated by Kobasa and her associates (Kobasa, 1979; Kobasa, Maddi, & Kahn, 1982) was based on individual characteristics that were absent in individuals who were not hardy. These researchers' inferences about what hardiness is led them to use personality scales to measure attributes which they believed correlated with the presence of hardiness. For example, commitment was measured in terms of the alienation that individuals experienced. Challenge was measured on a security scale. Surmising that the characteristic of hardiness was present if there were low scores of alienation and high scores of security is an extrapolation that was not supported in Kobasa's research or any published theoretical models. The logic of using these test results to surmise that an individual has personality characteristics of commitment, control and challenge is questionable.

Health-Related Hardiness

As the concept of hardiness was further refined, the surrogate term of "health-related hardiness" was developed. Concepts from several other schools of thought (such as psychology, existential psychology, social psychology and

nursing) were incorporated into the construct of health-related hardiness. These included authenticity, coping, adaptation, and the developmental tasks of adulthood. In the literature the health-related hardiness construct includes specific theoretical and operational definitions which can be used to investigate the positive effects of hardiness in a health-care setting or in a health-care context. Previous researchers using the concept of hardiness have used measurement instruments that rely on negative indicators that may instead tap general maladjustment or psychopathology rather than the potential illness buffering effects of hardiness (Kobasa, 1979; Kobasa, Maddi, & Kahn, 1982). The work of Pollock (1984; 1986; 1989) was paramount in overcoming: (a) the theoretical concerns about the relationship between hardiness and health, (b) the lack of empirical support for the effect of hardiness on adaptation to actual or potential health problems, and (c) measurement issues.

Pollock (1989) originally ascribed three domains to the concept of Health-Related Hardiness. These domains were congruent with the original personality characteristics of hardiness developed by Kobasa et al. (1985).

> The control domain of the health-related hardiness concept was defined theoretically as the use of the ego resources necessary to appraise, interpret, and respond to health stressors. Appropriate appraisal and

> interpretation lead to the individual's reliance on internal or external locus of control or both depending on the health stressor. The appraisal and coping strategies an individual uses in adaptation would represent a commitment to or involvement in health-related activities appropriate to health stressors. Challenge was defined as the reappraisal of the health stressors as potentially beneficial or rewarding rather than threatening or harmful (Pollock, 1989, p 55).

As Pollock continued to build on the ideas that Kobasa (1979) first proposed, she determined that the areas of commitment and challenge were so closely related that they were not discrete dimensions (personal communication, March 5, 1995). Pollock believes that individuals may not separate commitment and challenge into discrete categories, but instead view the situation as a challenge because they are committed to maintaining their health (personal communication, March 5, 1995). As a result of this theoretical change, Pollock (1984) developed the Health-Related Hardiness Scale to use in her research.

Through the use of The Health-Related Hardiness Scale researchers can measure the domains of control and commitment/challenge in such a way that the presence of the characteristics are identified. This differs from the manner in which Kobasa (1979) measured for hardiness. For example, Pollock (1989)

measures control by the presence of health locus of control compared to Kobasa (1979) who measured it by the absence of powerlessness. Commitment is measured by Kobasa (1979) as the absence of alienation, but Pollock (1989) measures its presence as evidenced by the individual's behaviour to health related activities. Finally, Pollock (1989) measures challenge by the presence of motivation for health promotion activities when confronted with health stressors, and Kobasa (1979) measures challenge by the absence of the need for security.

Control

Pollock (1989) refers to the belief system that interprets the perceived threat of a stressful situation as a "control issue". This "control" is the individual's ability to use cognitive, social, and behavioural skills in an organized manner to decrease the effects of stressful situations. In addition to Pollock, and other scientists have also suggested that accurate perceptions of the self, the world, and the future are essential for a general sense of well-being (Antonovsky, 1990; Bandura, 1982; Beck, 1976; Burns, 1980; Pollock, 1989; Scheier, Wientraub, & Carver, 1986; Seligman, 1990).

Commitment/Challenge

Pollock (1989) defines commitment as the appraisal and subsequent involvement in activities aimed at decreasing the effects of stressors. As individuals engage in these activities, the challenge component of this domain also becomes relevant as it is the individual's ability to view the stressors as potentially beneficial. Individuals see their efforts as meaningful and beneficial because they are committed to maintaining their health. This has been identified as the most crucial hardiness factor in health maintenance (Kobasa et al., 1982).

Generally, Pollock (Pollock, 1986; Pollock, 1989; Pollock, Christian, & Sands, 1990) has found her investigations provide evidence that health-related hardiness has direct and indirect effects on adaptation to stressful situations. Therefore, the presence of particular behaviours and attitudes which may predispose some people to think and act in a "hardy" way can facilitate their growth and further development. An important question remains unanswered: Can these behaviours and attitudes be promoted? If so, how can these "hardy" attitudes, feelings, and behaviours be promoted?

Other Clinically Relevant Studies

There has been considerable interest in exploring the influence stress has on health status (Bruehl, McCubbin, Wilson, Montgomery, Ibarra, & Carlson, 1994; Hellman, Budd, Borysenko, McClelland, & Benson, 1990; Kobasa, 1990; Kobasa et al., 1982; Nicholas, 1993; Peterson & Seligman, 1987; Pollock, 1984; Pollock, 1989; Pollock, Christian, & Sands, 1990; Raitasalo, Reunanen, Impivaara, Heliovaara, Lehtine, Joukamaa, and Maatela, 1994; Ross, 1991; Scheier & Carver, 1987; Stern, McCants, & Pettine, 1982; Turkington, 1987; Wilkinson & Mynors-Wallis, 1994). Despite theorists advocating the use of models to organize observations, focus inquiries, set goals, formulate interventions, and the communication of research findings (Beckstrand, 1978; Benoliel, 1977; Chinn & Jacobs, 1978; Conant, 1967; Dickoff & James, 1986; Dickoff, James & Wiedenbach, 1968; Ellis, 1969; Friedman, 1992; Gortner, 1975; Gortner, 1990; Gunter, 1962; Johnson, 1991; Kobert & Folan, 1991; Mayberry, 1991; Schlotfeldt, 1971; Walker, 1971; Watson, 1981) very few researchers have used a clear theoretical framework to focus their inquiries, or develop their hypothesis. This is particularly problematic in the area of hardiness research. As a result, organizing the various observations, integrating the treatment intervention suggestions and a systematic comparison of the findings for this review was difficult.

In general, in the research conclusions have indicated that there is a positive correlation between the amount of stress experienced and the development of physical and psychological symptoms (Mikail, Henderson, & Tasca, 1994; O'Leary, 1985; Pennebaker & Beall, 1986; Schwartz, Slater, & Birchler, 1994; Turkington, 1987). Furthermore, many researchers, after analyzing the relationship between appraisal and perception of health stressors affecting physical status, have concluded that interventions which positively effect changes in health behaviour are at least partially mediated by changes in clients' judgments of their own coping capabilities (Bennett, Benson, & Kuiken, 1986; Bruehl, McCubbin, Wilson, Montgomery, Ibarra, Carlson, 1994; Dillon, Minchoff, & Baker, 1985; Fries, Bloch, Harrington, Richardson, & Beck, 1993; Kaplan & Camacho, 1983; Mikail & Henderson, 1994; O'Leary, 1985; Raitasalo, Reunanen, Impivaara, Heliovaara, Knekt, Joukamaa, & Maatela, 1994; Schwartz, Slater, & Birchler, 1994; Spiegel, Bloom, Kraemer, & Gottheil, 1989; Strong, Ashton, & Stewart, 1994). These coping capabilities are impacted by the person's thoughts, feelings and behaviours (Pollock, 1989). The manner in which this psycho-physiological connection occurs has yet to be conclusively determined.

Researchers studying interventions designed to decrease stress and facilitate psychological coping have been conducted primarily in the context of a

small group (Fries et al., 1993; Hellman et al, 1990; Kabat-Zinn, 1982; Lorig, Laurin, & Holman, 1984; Lorig, Kraines, Brown, & Richardson, 1985). The research that is the most significant to this study was done by Hellman, Budd, Borysenko, McClelland, and Benson (1990) of Boston, Massachusetts. These researchers compared three different treatment programs:"Ways to Wellness", "Mind/Body Group", and a generic stress management information group. The "Ways to Wellness" and the "Mind/Body Group" synthesized (a) behavioural, (b) cognitive, and (c) psychophysiological approaches in an attempt to decrease stress and facilitate psychological coping. The generic stress management information group was comprised of a leader distributing information about stress management in a lecture style format. The programs/groups were compared using physical symptoms, and psychological distress as outcome measures. Hellman and colleagues (1990) believed that these programs ("Ways to Wellness" and the Mind/Body Group") would reduce the use of a health maintenance organization if participants experienced a decrease in the number and/or intensity of reported physical symptoms and the reported level of psychological distress. Although they did not use a guiding theoretical model, several of their assumptions parallel those in the health-related hardiness literature. These include: (a) the belief that an individual's ability to respond to health stressors is impacted by the individual's

ability to appraise, interpret and respond to stress and (b) particular behaviours and attitudes predispose some people to think and act in a particular way. Their underlying premise is that an individual has the ability to change behaviours, attitudes, and thoughts. This corresponds to the belief of Bigbee (1987) that hardiness has health-promoting potential.

The information in these programs was developed for the users of the Harvard Community Health Plan (the local health maintenance organization). Most of these users had high levels of education. In this research project 80 subjects were "randomly assigned" to one of the three intervention groups (Ways to Wellness or Mind/Body Group or a Stress Management Information Group). The Ways to Wellness (n = 28) and the Mind/Body Group (n = 27) consisted of a six week program that used "relaxation response training, awareness training, and cognitive restructuring to foster a sense of internal control" (Hellman et al., 1990, p 166-167). The Stress Management Information Group (n = 25) consisted of a two session stress management information course.

The results of this study revealed that there were statistically significant differences between the treatment (Ways to Wellness and Mind/Body Group) and control group (Stress Management Information Group). The statistically significant differences were found in two areas: treatment group reduction in

medical visits, and a treatment group decrease in discomfort from physical and psychological symptoms six months after the group interventions were completed.

Replication of the results of this study, by this researcher, would be difficult for two reasons. First, the subjects were a convenience sample drawn from one health maintenance organization. The aforementioned sampling practice results in a lack of randomization in sampling which effects the sampling representativeness and increases the possibility of sampling bias. Therefore, the heterogeneity of the group is questionable, which can make replication of the results difficult. Secondly, the information that was distributed during the treatment group sessions was written in a manner that required at least some post-secondary education to fully comprehend. For example, the workbook accompanying the program begins by describing the prevailing world view as being Cartesian, and the summary of the introduction is as follows "this workbook is not a philosophic text... however, [it] is based on a rigorously articulated world view applied to consideration of problems of the body" (Budd & Vieweg, 1990, p. 4). The level of education needed to fully comprehend the workbook used in the Hellman et al. (1990) study is not congruent with the average level of education achieved by the general public.

In summary, many researchers are supportive of the opinion that stress

contributes to the development of physical and psychological illnesses. Even though some individuals experience high levels of stress some they are able to remain healthy. Behavioural and attitudinal attributes have been identified as the internal resources that enable individuals to remain healthy even though they experience high levels of stress. It is believed that an individual's thoughts, feelings and behaviours which suggest the presence of health-related hardiness can be facilitated through health-promotion programs (Bigbee, 1987; Nicholas, 1993; Pollock, 1986; Pollock, Christien, & Sands, 1990; Ross, 1991). If so, people with low levels of health-related hardiness have the potential to learn "hardy ways" (ways of thinking, feeling and behaving) which could enable them to cope more effectively with the stress in their lives. It is clear that knowledge about the impact of health promotion interventions is fundamental to the development of successful health promotion programs. These programs would facilitate positive client outcomes. To date, there is limited research documenting this relationship. Therefore the purpose of this study was to investigate if these "hardy ways" of thinking, feeling and behaving can be promoted using clinical nursing interventions.

Chapter 3

METHOD

Design

A quasi-experimental nonequivalent control group design was used to determine: 1) if a psycho-educational health promotion program changed the way individuals viewed important issues relating to their health as measured by the Health-Related Hardiness Scale; 2) if a psycho-educational health promotion program changed the number of self-identified psychological symptoms of an individual as measured by the Brief Symptom Inventory; 3) if individuals identified changes in thoughts, feelings and behaviours following a psycho-educational health promotion program; and 4) if a psycho-educational health promotion program influenced the number of difficult life circumstances as measured by the Difficult Life Circumstances Scale.

Independent and dependent variables were selected on the basis of the findings from the literature review. The independent variable was participation in a psycho-educational health promotion program (The Wellness Program: A Program on Basic Life Issues Affecting Health). The dependent variables were (a) individuals' views of important issues related to their health; (b) self-identified psychological symptoms; (c) the subjective experience of individual thoughts,

feelings and behaviours; and (d) difficult life circumstances.

Since random assignment did not occur, due to ethical considerations, a "waiting list" control group was used to minimize the threats to internal validity. Creating a non-treatment control group could be considered as unethical since previous researchers have demonstrated positive effects from similar programs (Cook & Campbell, 1979). Since this study focused on improvement of individuals' health, withholding an intervention a potentially beneficial intervention could not be justified. Therefore, the control group consisted of five individuals who were waiting to participate in the next available health promotion program.

There was a potential risk that subjects in the control group would seek another psycho-educational program prior to completion of the study. This would have jeopardized the internal validity of this study. Brink and Wood (1989) suggest when subjects perceive that an experimental treatment has value they may be "unwilling to tolerate an imposed inequity in the distribution of the treatment. The result may be that the treatment is obtained by subjects making up the control group so that the planned experimental condition is compromised" (p. 36). As the waiting list subjects knew they would be involved in the next program they did not enroll in a similar program elsewhere. Using a control group helped determine if testing affected responses, regardless of treatment, another threat to internal

validity.

Threats to external validity were dealt with by the participation in the program being made as convenient and as unextraordinary as possible. In doing so "there is less likelihood of systematic recruitment factors operating that lead to results that apply only to the "very special people" who agree to participate" (Brink & Wood, 1989, p. 37).

The impact of a psycho-educational health promotion program was compared using pre and post test measures of the above scales (see figure 1). Pre-testing occurred prior to commencing the psycho-educational health promotion program (treatment group) or when individuals on the waiting list consented to being in the study (control group). Post-testing occurred for the treatment group at the end of the eight session psycho-educational health promotion program and after the 3 month follow-up session. Control group post-testing occurred 2 months after the initial testing and 5 months after the initial testing.

Setting

The research was conducted in a small rural Albertan community. The psycho-educational health promotion program was facilitated in the conference room of the local General Hospital.

Figure 1. The time-line of the research study: The Impact of a Psycho-educational Program on Clients' Symptoms and Health-Related Hardiness.

Treatment Group

I----------I----------I

January 22, 1996 March 18, 1996 June 17, 1996

I---------I

March 28, 1996

(interviews)

First Session of Wellness Program

Last Session of Wellness Program

Follow-up Session

PRE-TEST	POST-TEST 1	INTERVIEWS	POST-TEST 2
- Background Information Sheet - Health-Related Hardiness Scale (HRHS) - Brief Symptom Inventory (BSI) - Difficult Life Circumstances (DLC) Scale - Open-ended Questions	- HRHS - BSI - DLC Scale	- semi-structure format	- HRHS - BSI - DLC Scale - Open-ended Questions

Control Group

---------I----------I----------I*

subjects acquired from waiting list until February 23,1996 10, 1996

- pretesting done as subjects consent to involvement in study

PRE-TEST	POST-TEST 1	POST-TEST 2
- Background Information Sheet - Health-Related Hardiness Scale (HRHS) - Brief Symptom Inventory (BSI) - Difficult Life Circumstances (DLC) Scale - Open-ended Questions	- HRHS - BSI - DLC Scale - Open-ended Questions	- HRHS - BSI - DLC Scale - Open-ended Questions

until April 18, 1996

until July

* end of study

All treatment group testing packages (excluding the semi-structured interview) were completed in the conference room of the hospital. The location of the interview was left to the subject's discretion. Three of these interviews were conducted in a private office at the Mental Health Clinic; the other two were conducted at the subject's home. For the convenience of the control group subjects, all testing was completed at the location of their choice. Two control subjects chose to complete the testing at home; the other three chose to complete the testing packages at work on a break.

Subjects

The subjects for this study came from a population of individuals living in rural Alberta. They believed their lives were being affected by stress and were self-referred to the Wellness Program jointly offered by The David Thompson Health Authority and the Provincial Mental Health Board. Those individuals who volunteered provided written consent and met the following eligibility criteria: 1) 18 years of age or older; 2) ability to read, write, and understand the English language; 3) attended at least 5 of the sessions of the Wellness Program: A Program on Basic Life Issues Affecting Health, or were on the waiting list within one month of the Wellness Program starting were included in the study. The individuals who consented to being in the study prior to the commencement of

data collection were assigned to the treatment group. The names of these individuals were initially obtained from the Wellness Program "waiting list". There was initially 15 names on this list. From these names, 12 people were planning on attending the January Wellness Program. Five, of these 12 people, met all of the eligibility criteria and were then included in this research project. The Wellness Program began January 22, 1996 and the last session was held on June 17, 1996. Those individuals who planned to participate in the Wellness Program, but due to timing and space availability needed to wait until the next program were assigned to the control group. Everyone waiting to participate in the future Wellness Program met the eligibility criteria and were included in this study.

Because a non-randomized sample was used, and because the size of the group was small, the results of this study cannot be generalized beyond the sample. This is recognized as a limitation. This project, however, was the first step in the on going evaluation process of the Wellness Program and a larger sample size will be available as the Wellness Program continues.

Description of Sample Used in Study

Individuals were made aware of the program via the mental health clinic literature and/or therapist referral, doctor's office, local community recreation and education brochure, articles in local paper, friends and family. The total sample

size was 10 subjects. A psycho-educational group cohort of 5 individuals comprised the treatment group and a cohort of 5 individuals waiting for the next psycho-educational group comprised the control group. All of the preceding individuals lived or worked in the Municipal District of Clearwater and were registered for the Wellness Program offered by the David Thompson Regional Health Authority and the Provincial Mental Health Board: Rocky Mountain House Community Mental Health Clinic.

Subjects' ages ranged from 55 to 23 years, with a mean age of 39.4 years. Of the 10 subjects, one was male. Twelve subjects initially started the Wellness Program. All subjects who were in the control group completed all the activities involved with this research project. Overall there was a 41% attrition rate for the treatment group subjects. There are several possible explanations for this rate of attrition. These reasons were provided by the subjects: unable to attend because of sprained ankle and related inability to get to group; increased demands at work and was inability to get time off; moved out of the area and problems with the car and thus unable to get to town. There were only two subjects for whom no explanation was obtained. The researcher did get some unsolicited feedback from another party that the physical abuse in one person's relationship had exacerbated and the participant was no longer allowed to associate with people outside of her

home. The data collected from these subjects has been omitted. Therefore n = 5 for the treatment group and n = 5 for the control group.

All of the treatment group subjects were female. Four were working full-time outside of the home; the other subject did not work outside of the home. All subjects were born in Canada. The subjects' education level varied: 1 subject had completed a trade or technical school, 2 completed high school, 1 completed grade 9 and 1 completed grade eight. Two subjects indicated that they were in long term relationships. All had utilized some type of health care service in the past year. The services used included: medical clinic visits (2-12 visits), hospital (2-20 visits), mental health (0-greater than 30 visits), chiropractor (0-20 visits), message (0-1 visit).

The control group was comprised of four females and one male. All were working outside of the home (2 part-time and 3 full-time). Four of the five subjects were born in Canada, the other was born in England (this subject has been in Canada for almost 30 years). The subjects' education level was less varied than the treatment group: 2 subjects had completed college, 1 subject had completed a trade or technical school, 1 had completed high school and 1 had completed grade 10. Three of the subjects indicated that they were in long-term relationships. All had utilized some type of health care service in the past year. The services used

included: medical clinic visits (2-15 visits), hospital (0-6 visits), mental health (0-10 visits), chiropractor (0-1 visits), massage (0-8 visit).

The two groups differ in the following areas. The control group in general has achieved a higher level of education. The treatment group has used the following health services more regularly than the control group: the hospital (most hospital visits were emergency department visits), mental health and the chiropractor. The treatment group subjects used the services of a massage therapist more (however it is only one subject that reported using this health care service).

The Program

The psycho-educational program, "Wellness Program - A Program on the Basic Life Issues Affecting Health", is a semi-structured group that takes place over 5 months. Potential participants were aware of the Wellness Program via articles and ads in the local papers, and advertisements in "Further Education" program guides and "by word of mouth" from previous Wellness program participants. As a result of such publicity, the "Wellness Program" was becoming known to this rural community. Throughout the course of the Program there were periodic articles in the newspaper about the "Wellness Program". The initial group size is limited to 12 people due to the size of the room and the nature of the

program. In past groups, the attrition rate has been 40 to 50%, but explanations for this rate of attrition have not been documented. The follow-up session of the program of the previous Wellness Program (which is the first time it was incorporated into the program) had an attendance of zero.

This program is based on a belief that every person is unique and has innate skills and abilities which are modifiable through the process of change. The axiom which this program was based is that for good health the interrelatedness of physical, emotional, mental, social, and spiritual aspects of individuals must be considered. "Good health" can be an objective and subjective assessment which may be defined differently by the health professional and the client. The program philosophy, goals and objectives are based on the above premises (see Appendix A). There are three primary goals of the Wellness Program. They are: (a) to assist individuals to respond to the challenge of change, (b) to assist individuals to assume control of stress in their lives, and (c) to assist individuals in developing a strong sense of purpose and direction in life and the commitment to exercise these beliefs (see Appendix A).

The program was developed by the researcher (in her role as a mental health professional) and the other nurse co-leader. It was developed specifically for use in a rural setting. No similar program for this setting was found. An

American program was deemed inappropriate for rural Canadian health-care consumers because it was designed to meet the needs of an urban university community. The content for the Wellness Program: A Program on Basic Life Issues Affecting Health was developed by: (a) reviewing the literature to see what other clinicians/researchers had included in their psycho-educational programs, (b) consulting physicians, nurses, social workers, psychologists, exercise specialist, and dietitians, and (c) consulting health-care consumers from a local hospital and mental health clinic. The content of the didactic sessions and the workbook content (see Appendix B) have been reviewed for accuracy and adequacy by mental health professionals and a health educator. The workbook material was given to various consumers who were asked to comment on the readability and ease of understanding. The comments of these individuals indicated that the workbook material was easy to read and its contents were helpful. The pilot test of the Wellness Program confirmed that the information contained in the workbook was salient and it was presented in an understandable manner.

One of the group leaders (the author) is a mental health specialist. She is prepared at a baccalaureate level, and is nearing completion of a Master's in Nursing. She has taken a number of specialty courses related to group therapy, completed a Psychiatric Nursing Program and has worked in the area of mental

health for approximately 10 years. The other leader is a nurse prepared at the Masters level. She has practised in the area of health education for approximately 17 years. She is also currently taking courses related to clinical counselling.

The Wellness Program was facilitated on Monday evenings (January 22, 1996; January 29, 1996; February 5, 1996; February 12, 1996; February 26, 1996; March 4, 1996; March 11, 1996; March 18, 1996 and June 17, 1996). The participants (of previous programs) had preferred to have the Wellness Program offered Monday evenings. The individuals currently waiting to take the program have also indicated they would prefer Monday evenings. The facilitators have previously taken into consideration the following factors when they scheduling programs: seeding time, harvest time, Christmas holidays, calving season, and summer holidays.

The sessions were facilitated weekly for four consecutive weeks - there was not a session the following week because of a statutory holiday - the next four sessions were facilitated over the next four consecutive weeks and the ninth session was held 13 weeks after the eighth session. All sessions were approximately two hours long. Each two-hour session comprised the presentation of information related to the topic for the week, the distribution of written material, and the handing out of exercises or reading for the participants to do at

home. The material distributed to the participants comprised the workbook. Most of the sessions ended with a relaxation exercise.

These exercises and group sessions were aimed at influencing the participants' self-concepts and the individual's thoughts, feelings and behaviours. Opportunities for these changes are believed to be facilitated by providing opportunities for growth and development via identification of: thoughts, feelings, goals, desires, past experiences and current behaviour. The sessions are facilitated in such a way that the programs philosophy, goals and the general objectives are promoted (see Appendix A). All group sessions and follow-up exercises are derived from the perspective that a person is greater than, and different from, the sum of his or her parts (Perls, Hefferline & Goodman, 1951). Group support is also an important component of this program.

Program Syllabus

The topics covered in session I included an introduction and an overview of the program. Since this is a psycho-educational program, throughout each of the sessions, group discussion was encouraged . Information on the relationship between the mind and body is also provided in this session. This was followed by information on stress, and general coping skills. The concept of humour was also presented as one skill that can be used when dealing with stress. The written

information, exercises and other information distributed to the participants at each of the sessions comprised the workbook (see Appendix B). The session ended with a deep muscle relaxation exercise lead by one of the group leaders.

At the beginning of each the subsequent sessions there was an opportunity to discuss questions and issues arising from the session last week or to discuss exercises and readings in the workbook (See Appendix B). The workbook was used differently by each member of the treatment group. Some members completed and read most of what was in the workbook. Others used the workbook as a reference tool, referring to it when they felt they needed some reinforcement or a review of issues addressed in the program. Despite this difference in usage all feedback on the program evaluations indicated that the participants found the workbook useful and believed it contained valuable information. All of the participants have indicated that they believe the workbook should be included in further programs.

Session II was used to identify the effects our feelings have in relationship to our health (physical, mental, emotional, social and spiritual). The technique of journaling was reviewed. Several of the group members shared their suggestions and experiences relating to journaling. For example, one member shared the following "I have been journaling for a few years now. It was hard to get started

[journaling], but I stuck with it. Journaling helps me sort out my thoughts and feelings". Issues that can effect self-esteem were also discussed, and methods of raising self-esteem were introduced. This session ended with an imagery relaxation exercise.

The next session was used to present the relationship our thoughts have to our feelings. A few salient concepts contained in David Burns book Feeling Good: A New Mood Therapy (1992) were discussed. This book was suggested as a good resource if members wanted further information on this topic. The second half of this session dealt with the relationship of physical activity on health. A guest speaker from the Kevin Sirous Fitness Centre presented this information. The session ends with some Tai Chi exercises.

Session IV continued with the impact that our thoughts have on our feelings, mood, and physical symptomatology. The second half of the session introduced the concept that personal goals are different from desires. The group built a collage to demonstrate the differences between a goal and a desire. During this exercise there was a lot of good discussion on how desires and goals differ which is followed by the topic, "How do we set realistic goals for ourselves?" This session ends with a relaxing instrumental musical selection. The participants are asked at this time to fill out a mid-point evaluation for the Wellness Program.

The results of these evaluations are used for further program development. General comments included: "[I] have found the program to be very thought provoking and with a very positive emphasis. Very helpful in focusing on specific needs in order to eliminate confusion"; "Make the community more aware of the program"; "Very Helpful"; "Maybe have it [the Wellness Program] twice a week but otherwise I find it thoroughly enjoyable and extremely helpful and useful in my life"; "It's been great and very helpful"; "Good program. I feel it is good for me but I feel there is a lot more that could be covered"; "The evenings are presented in a very relaxing way. No pressure"; and "I feel welcome here. Thanks".

Issues relating to codependency were addressed in session V. These issues included: (a) problematic behaviours, and (b) common roles in families that experience codependency. The term "codependency" was not used by the leaders of the group. The focus in the group was dealing with issues and problems. Concepts relevant to our spirituality were also presented in this session. These included: (a) meaning and purpose in life, (b) hope, (c) relationships, and (d) personal values. The group was asked to derive what spirituality meant to them. The group was divided into two smaller groups to complete this project. Once this was completed the members returned to the large group setting and identified what factors impact their own sense of spirituality. With these factors in mind

discussion occurred regarding how you can increase your own sense of spirituality. This session ended with 15 minutes of practising Benson's Relaxation Method (Benson, 1975).

Session VI dealt with relationships. Areas of relationship difficulty were identified and means of possible resolution were discussed. There was a great deal of horizontal self-disclosure occurring in this group. As the group progressed there were several instances of vertical disclosure. One example was a group member discussing the difficulty she was having with a co-worker. Communication skills were the primary focus of this session. These skills included "I messages" and listening skills. In this session role playing was used help clarify salient points. This session ended with 15 minutes of practising an Ericksonian Relaxation Technique (Erickson &Rossi, 1979).

Session VII continued with skills that are vital to the functioning of healthy relationships. Skills reviewed and practised were assertiveness and conflict resolution techniques. Scenarios (role plays) were used to compare response styles. The session ended with one of the group leaders reading a reflective poem.

The last consecutive session reviewed the relationship that diet has to our health. A clinical dietician presented this information. The second half of the session was used to discuss any questions that have been unanswered thus far.

The group also planned the three month follow-up session. It was decided, as a group, that they were interested in learning more about budgeting on minimum wage and cooking on a limited income. Final program evaluations were distributed for the purpose of program development. In general the participants indicated they found the program helpful and would like to see a follow-up program. It is interesting to note that every program evaluation returned (there was a 100% return rate) indicated that the individual could identify some behaviour changes they had made since starting the program. Examples of behavioural changes cited included: more assertive, think before speaking, confronting people if there are issues, trying to deal with my issues rather than avoiding them, caring for myself more, and becoming more aware of my automatic thoughts and (I) am taking action when they come.

Session IX included information presented by a dietician regarding meal management on a budget. The second half of the session on budgeting on minimum wage was facilitated by a woman who out of necessity had received social assistance for a few years when she was raising four young children on her own. She provided the group with a factual account of how budgeting with very little money is possible. She also demonstrated that adversity in life can be overcome through commitment, control and challenge.

The Measures

Background Information Sheet

A Background Information Sheet was used to collect the demographic data of the participants (see Appendix C). This tool was developed specifically for this research project.

Open-ended Questions

The open-ended questions have been developed specifically for this research project (see Appendix D).

Health-Related Hardiness Scale

Hardiness has been measured in a variety of ways and the concept has been adapted to meet the measurement needs of specific populations. The earlier scales measured the negative aspects of the hardiness characteristic (Kobasa, Maddi, & Hahn, 1982), where as the later scales measured positive aspects (Pollock, 1986). The aspects measured related to thoughts, feelings and behaviours of the individuals tested. The Health-Related Hardiness Scale (HRHS) was originally designed to measure the levels of control, challenge and commitment in the chronically ill individuals (Pollock, 1984). Originally, the internal resources of health-related hardiness were thought to be comprised of three dimensions: 1) control: mastery in appraisal of health stressors, 2) commitment: the ability to cope

with the threat of health `stressors', and 3) challenge: the reappraisal of health stressors as beneficial and growth producing (Pollock, 1989). The original 51-item HRHS was refined and subsequently yielded a more parsimonious 34-item HRHS which was used in this study. Dr. Pollock gave the researcher permission to use the 34-item HRHS (personal communication, March 5, 1995).

This 34-item HRHS was constructed using a six-point Likert type scale with two subscales: 1) commitment and challenge, and 2) control. The commitment and challenge items are now thought to be so closely related that they are no longer viewed as discrete dimensions of hardiness in the context of health (Pollock & Duffy, 1990). High scores on the HRHS indicate the presence of the "hardy ways" of thinking, feeling and behaving. Cronbach's alphas have been calculated for the 34-item HRHS. The total HRHS has high internal consistency with a standardized alpha coefficients of .91 for the total scale and .87 for each subscale. Test-retest, reliability coefficients ranged from .74 to .78 (Pollock & Duffy, 1990). Content validity was established by a panel of experts (n=5) with agreement that the HRHS was more appropriate than the original hardiness instrument (Kobasa, 1979) for health-related research (Nicholas, 1993).

The Brief Symptom Inventory

The Brief Symptom Inventory (BSI) is a brief form of the Symptom Distress Checklist 90-R (SCL-90-R). The BSI was purchased for use in this project. The BSI is a controlled psychological test, therefore, the researcher obtained the services of a chartered psychologist to score and interpret these test results. The version used in this study has been designed to reflect the psychological symptoms of community nonpatient respondents. The 53 item, 5 point Likert self report rating scale is sensitive to low levels of psychologic symptoms in normal populations (Derogatis & Melisaratos, 1983). Estimated time for completion of the BSI is less than 10 minutes (Derogatis & Spencer, 1982). The BSI measures 9 primary psychological symptom dimensions. These include: (a) somatization, (b) obsessive-compulsiveness, (c) interpersonal sensitivity, (d) depression, (e) anxiety, (h) hostility, (i) phobic anxiety, (j) paranoid ideation, and (k) psychoticism. The BSI can also provide a psychometric appraisal of psychological well-being (Derogatis & Melisaratos, 1983). Derogatis and Melisaratos (1983) report that the internal consistency coefficients based on a sample of 719, using Cronbach's alpha coefficient ranges from .71 to.85. The test-retest reliability of the BSI ranges from .68 to .91. Validity has been established through comparing the results of the BSI to parallel constructs from the Minnesota

Multi-phasic Personality Inventory (MMPI). In the general findings show a high convergence (Derogatis & Melisaratos, 1983).

The Difficult Life Circumstances Scale

The Difficult Life Circumstances (DLC) Scale (Barnard, Johnson, Booth, & Bee, 1989) was used to determine the existence of difficult life circumstances. Difficult life circumstances include: regular arguments life a partner, long-term debts, unemployment, problems with neighbours, problems with alcohol or drugs, victimization by criminals and being abused (sexually, physically and/or emotionally). The DLC was purchased for use in this study. It is believed that individuals who experience these types of problems have more general stress with which to deal. Barnard et al. (1989) have suggested that the DLC scales could be used to assess individuals to determine if there is a level of risk in the family for non-compliance, anxiety, powerlessness, disturbance in self-confidence, alteration in parenting, potential for violence, and ineffective coping. The test-retest correlations have ranged from .40 to .70. The DLC has also shown a consistent relationship with the Beck Depression score, a physical symptom checklist, and social support measures. These correlations ranged from .20 to .59. In the women that were assessed with the DCL, high scores indicated a greater probability of depression, more physical difficulties, and less social support. When

used clinically it has been suggested that, if the score is 6 or above, further assessment and possible intervention is needed.

Data Collection

Procedures

Two methods were used to collect data. These methods were self report, and semi-structured interview. Testing packages were collated and the participants names were on the outside of the testing packages, however, once the tests were completed, only an identification number distinguished the respondents. One semi-structured interview per treatment group subject occurred between 5 and 10 days after the completion of the eighth consecutive session of the Wellness Program. An overview of the data collection procedures are presented in Appendix E and F. An overview of the time-line for this study is presented in Figure 1.

Treatment Group

At the beginning of the first session of the Wellness Program the participants were asked to complete a confidential background information sheet and answer the several questions. For example: What interests you about this group?, Do you think this group will help you? If so, how?, What does being healthy mean to you?, How would you rate your health on a scale from 1 to 10,

where 1 is not healthy and 10 is the healthiest anyone can ever be? How would you rate the current level of stress in your life on a scale where 1 is no stress and 10 is the most stress you could ever imagine? In addition the participants were also asked to complete the Brief Symptom Inventory (Derogatis & Melisaratos, 1983), the Health-Related Hardiness Scale (Pollock & Duffy, 1990), and the Difficult Life Circumstance Scale (Barnard, Johnson, Booth, & 1989). Subjects required between 15 and 40 minutes to complete their pre-test package. Immediately after the last session individuals were asked to fill out the Brief Symptom Inventory (Derogatis & Melisaratos, 1983), the Health-Related Hardiness Scale (Pollock & Duffy, 1990), the Difficult Life Circumstance Scale (Barnard, Johnson, Booth, & Bee, 1989), and answer open-ended questions relating to the changes they noticed in themselves since starting the program, if their idea about what being healthy means had changed, and if their rating of how healthy they are had changed. Subjects required between 20 and 30 minutes to complete the first post-test package. The open-ended questions were asked in a semi-structured taped interview which occurred at a time and place that were convenient to the subjects. Three chose to have the interview in an office setting and two chose to have the interview conducted in their own home. All interviews were completed within ten days of the eighth consecutive Wellness Program

session. The time required to complete these interviews was less than 15 minutes per interview. Twelve weeks later the subjects were asked to fill out the same tests, but the open-ended questions now asked if they have noticed any changes in themselves since the program ended and the respondents wrote out their answers. This testing took approximately 15-30 minutes. Further details are found in the information letter (see Appendix G) and the informed consent (see Appendix H).

Control Group

Those individuals waiting to take the Wellness Program were asked to complete the same self-reporting questionnaires as the treatment group. The open-ended questions were reworded to indicate "since the last testing" rather than since the start of the Wellness Program or since the program has ended. All answers to the open-ended questions were written out. All testing required 20-40 minutes of the subjects' time.

Data Analysis

For this study, the plan was to look for relationships between client symptoms, individual thoughts, feelings and behaviors related to health-related hardiness, and participation in a psycho-educational program. To analyze the data, the researcher summarized the demographic data gathered from the subjects. This data is described in the subjects section of this chapter. The mean of the data

gathered for the HRHS, BSI, and the DLC scale were calculated. The themes of the open-ended questions were identified and presented. The quantitative data (HRHS scores, BSI Dimensions scores, BSI Global Indices scores and DLC Scale scores) were analyzed using a repeated t-test to determine if there has been change in the treatment subjects. T-tests were also used to determine if there is a difference between the treatment and the control group. The assumption made to allow the use of the paired t-test in this research is that the sample 1 (treatment group pre-test) and sample 2 (treatment group post-test one and two) are drawn from a statistically normal populations and that the populations have the same variance. Using the t-test to compare two independent means required the researcher to make following assumptions: the control and treatment groups are normally distributed and the two groups are homoscedastic. The statistical technique of t-tests was chosen as:

> it has been shown that the t-test is robust with respect to violation of the homogeneity-of-variance assumption when $n_1 = n_2$. ... for practical purposes one need not even test the assumption of homogeneity of variance when n's are equal. (Glass & Hopkins, 1984, p. 238)

The repeated use of t-tests is also recognized as a limitation because with the use of several t-tests between each pair of means, the probability of one or more type-I

errors is greater than the predetermined alpha level (Glass & Hopkins, 1984). This was also accepted as a limitation because the use of repeated t-tests was limited to three and the subject's responses were used to support the statistically significant results of the t-tests performed on the quantitative data. The statistically significant results are discussed (in chapter five) in conjunction with the qualitative responses from the subjects. The use of convenience sampling (lack of randomization) is accepted as a limitation of this research project. Statistical significance was set at $p = .05$.

Limitations of the Study

The following is a summary of the limitations of this study. First, the use of convenience sampling (lack of randomization) is recognized as a limitation of this research project. However, when evaluating treatment programs that are likely to be beneficial to the participants it may be viewed as unethical to "randomly" withhold treatment from the subjects assigned to the control group. Second, the repeated use of t-tests is also recognized as a limitation. Third, the greatest limitation of this study, is the small sample size. Since this is only the first step in the ongoing process of evaluating the Wellness Program, however, this limitation is acceptable. It is anticipated that the evaluation of the Wellness Program will continue, but these longitudinal evaluation efforts are beyond the

scope of this study.

Ethical Considerations

Several methods were used to ensure that individual rights in this study were protected. For example, ethical clearance was sought from the University of Alberta and The Provincial Mental health Board via Alberta Hospital Ponoka. Tests, audiotapes and transcripts of the interviews were kept by the researcher in a locked cabinet. Data was only be accessible to the researcher, her committee, an experienced charted psychologist and the transcriptionist. Information known by these individuals is kept in confidence. Written copies of the transcription tapes were be made by an experienced transcriptionist with tapes and typed copies are identified by code numbers and all names of individuals, organizations and settings have been removed to protect the anonymity. The list of code numbers is stored in a separate locked cabinet from the tests, tapes and transcribed records. All consent forms were stored in a separate cabinet during the study and will be destroyed 5 years after the study is completed. Tests, tapes and records will be kept for 7 years after the completion of the study. After that time the tapes will be destroyed and the tests and the transcripts will be kept for an indefinite period of time.

There is no mention of names of the participants in the data analysis or

discussion of results and any material in quotes will be altered to prevent disclosure of informant identity.

The potential subjects were informed that the study involved research and the research was to determine if individual thoughts, feelings and behaviors associated with the internal resources of health-related hardiness can be taught using an innovative psycho-educational program - Wellness program: A Program on the Basic Life Issues Affecting Health. They were also informed about the purpose and duration of the study. Any foreseeable risks and benefits were explained (see Appendix G and Appendix H). The researcher obtained written consent from the subjects (see Appendix H). The participants were told how they might seek assistance should they experience any amount of distress during the study and referral resources were available (see Appendix I). No formal referrals were required during the course of the study. Subjects were informed that the study is voluntary and that they might choose to leave the study at any time if they so desired.

Chapter 4

RESULTS

The purpose of this study was to examine the impact of a specific clinical nursing intervention (The Wellness Program) in terms of its usefulness to foster the development of thoughts, feelings and behaviours associated with health-related hardiness. In addressing this purpose the following research questions were asked: 1) Does a psycho-educational health promotion program change the way individuals view important issues related to their health as measured by the Health-Related Hardiness Scale? 2) Does a psycho-educational health promotion program change the number of self-identified psychological symptoms of an individual as measured by the Brief Symptom Inventory? 3) What changes do individuals identify in thoughts, feelings and behaviours following a psycho-educational health promotion program? and 4) Does a psycho-educational health promotion program influence the number of difficult life circumstances as measured by the Difficult Life Circumstances Scale? This chapter is divided into four sections. In which the data summaries answer the above research questions are presented.

Question One

The first question addressed the relationship between participation in a psycho-educational health promotion program and changes in the way individuals view important issues related to their health as measured by the Health-Related Hardiness Scale. The Health-Related Hardiness Scale (HRHS) was used in this study to measure the levels of control, challenge and commitment in the subjects. The higher the individual score the "hardier" the individual is thought to be. The highest score attainable on the HRHS is 204. Pollock and Duffy (1990) have not yet developed norms or health-related hardiness profiles which could be interpreted clinically. At this stage in the development of the HRHS the only responsible clinical interpretation of the HRHS would be that individuals with higher HRHS scores are more hardy (feel more control and commitment/challenge) than those individuals with a low score. In addition, researchers have not demonstrated that gender is a factor in the scoring or analysis of the HRHS. Since it has not been suggested that gender is a factor in health-related hardiness, all ten subjects (5 treatment group subjects and 5 control group subjects) data have been pooled together for data analysis.

The data gathered using the HRHS was analysed using Repeated-Measures t Test (treatment group compared to treatment group/control group compared to

control group) or the Independent-Measures t Test (treatment group compared to control group). Resultant means from the HRHS are reported for the treatment and control group, and t-scores for differences between the treatment and control group are presented in Table 1. The statistical analysis did not reveal any significant changes in the treatment group from pretest to posttest 1 or 2, or between posttest 1 and posttest 2 (critical two-tailed t = 2.78). There were also no significant changes for the control group between pretest to posttest 1 or 2, or between posttest 1 and posttest 2 (critical two-tailed t = 2.78). Treatment and Control group scores were also not significantly different on any of the tests (critical two-tailed t = 2.31).

Treatment group HRHS pretest scores ranged from 145 to 168 with a mean of 160. At the first posttest three of the five HRHS scores increased. The mean at this testing point was 167.3. Individual scores ranged from 142 to 187.5 . At the second posttest four of the five subject's scores had increased from pretest and posttest 1 values. The Treatment group HRHS mean for posttest 2 was 169.6.

The control group scores reflect a different outcome despite this group's

Table 1

Health-Related Hardiness Scale Means and t-Scores

Test	Treatment Group	Control Group	t - Score (treatment/control group means)
Total Scores			
pretest	160	169.6	-1.158
posttest 1	167.3	174.4	-0.763
posttest 2	169.6	172.2	-0.238

p = 0.05

* statistically significant change from pretest (critical two tailed t = 2.78)

average HRHS score being higher than the treatment group. At the initial pretest the control had a HRHS score mean of 169.6. Scores ranged from 146 to 190. As with the treatment group, three of the five subjects' levels of health-related hardiness increased. The mean score was 174.4. The range of scores was 160 to 192. The difference between the two groups was revealed by the second posttest. At this point only one control group subject scored higher than on posttest 1 and only two control group subjects scored higher than they did on the pretest. The second posttest mean was 172.2 and the range of scores were 145 to 190. Despite obtaining no statistical significant differences between any of the tests (pre/post 1/post 2 and treatment/control group) the results of the HRHS merit further discussion.

Question Two

The second question related to the effect of participating in a psycho-educational health promotion program on the number of self-identified psychological symptoms as measured by the Brief Symptom Inventory. The Brief Symptom Inventory (BSI) is a self-report psychological symptom inventory that is comprised of nine primary symptom dimensions and three global indices. "It is not a measure of personality, except indirectly, in that certain personality types and Diagnostic Statistical Manual axis two disorders may manifest a characteristic

profile on the primary symptom dimensions" (Derogatis, 1993, p. 4-5). The primary purpose of the BSI as it is used in this study was to measure current, point-in-time, psychological symptom status. Four major norms have been developed for the BSI. These norms were derived from four distinct normative samples: adult psychiatric outpatients, adult nonpatients, adult psychiatric inpatients and adolescent nonpatients. Norms for each of the samples have been established for males and females. For this study the adult nonpatient norms were thought to be representative of the people attending the Wellness Program.

The sample used in this study contained nine females and one male. A BSI profile report was developed for all subjects by a chartered psychologist. This profile report contained raw scores, area T scores (this data was incomplete as the psychologist was unable to calculate all T-scores using adult nonpatient norms provided in the BSI Nonpatient Adult Hand-scoring Starter Kit), and (when applicable) a graph of plotted area T-scores. Two subjects did not graph well using the adult nonpatient norms to obtain area T-scores. One of these subjects was a female in the treatment group and the other was a male in the control group. A decision was made to use the raw data obtained from the subjects versus using the area T-scores because not all the raw data could be converted to area T-scores (using adult nonpatient norms) for determining significant change in the treatment

group (pretest, posttest 1 and posttest 2). Since this study used a very small sample, the data from each subject was vitally important. Using the raw scores enabled the researcher to capitalize on all data collected and not just the data easily converted into area T-scores. Raw scores were also used to determine if there were differences between the treatment and control groups at pretest, posttest 1 and posttest 2.

As the decision was made to use raw scores, another decision needed to be made about the inclusion of the male subject's raw scores in the data pool developed from the control group's raw scores. Since the raw score adult nonpatient norms are not equivalent for males and females a direct comparison of these raw scores was not appropriate. Therefore, for the purposes of directly comparing the treatment and control groups the data from the male subject was not included in the control group data pool. Data from this subject was also not included when direct comparisons were made using the control group from pretest to posttest 1 to posttest 2. When the area T-scores were graphed and this pictorial representation was used to compare control group subjects, other than on one symptom dimension there was relatively little difference between the male subject and three control group females. A detailed discussion about the data collected from the male subject is not possible as it would jeopardize his anonymity. If there

had been other male subjects in this study, comparison testing would have occurred for both male and female subjects of the treatment and control groups.

The data gathered using the BSI was analysed using Repeated-Measures t Test (treatment group compared to treatment group/control group compared to control group) or the Independent-Measures t Test (treatment group compared to control group). Symptom dimension means (treatment and control) and t-scores for differences between the treatment and control group are presented in Table 2. Global Indice means and t-score differences between treatment and control group are presented in Table 3. Significant differences between treatment group pretest, posttest 1 and posttest 2 scores were found on four symptom dimensions (obsessive compulsive, hostility, paranoid ideation and psychoticism) using the Repeated-Measures t Test.

The obsessive compulsive dimension included symptoms that are often associated with the standard clinical syndrome of Obsessive Compulsive Disorder. This subscale focuses on thoughts, impulses, and actions that the subject experiences as unremitting and irresistible, but are unwanted (Derogatis, 1993). There was a significant difference between the obsessive compulsive symptom

Table 2

Brief Symptom Inventory Dimension Means and t-Scores

Dimension	Treatment Group	Control Group	t - Score (treatment/control group means)
Somatization			
pretest	1.024	0.638	0.549
posttest 1	0.538	0.565	-0.156
posttest 2	0.568	0.388	0.673
Obsessive Compulsive			
pretest	2.578	1.245	2.617**
posttest 1	1.296*	1.289	0.048
posttest 2	1.096*	1.205	-0.261

(table continues)

Dimension	Treatment Group	Control Group	t - Score (treatment/control group means)
Interpersonal Sensitivity			
pretest	2	0.688	1.77
posttest 1	1	0.75	0.882
posttest 2	0.7	0.603	0.418
Depression			
pretest	1.598	0.71	1.392
posttest 1	0.964	0.998	-0.086
posttest 2	0.73	0.538	0.465
Anxiety			
pretest	1.864	0.83	1.66
posttest 1	0.696	0.998	-1.213
posttest 2	0.598	0.828	-0.973

(table continues)

Dimension	Treatment Group	Control Group	t - Score (treatment/control group means)
Hostility			
pretest	1.52	0.55	3.618**
posttest 1	0.8*	0.9	-0.595
posttest 2	0.56*^	0.55	0.045
Phobic Anxiety			
pretest	0.52	0.15	1.217
posttest 1	0.24	0.3	-0.28
posttest 2	0.32	0.1	1.151
Paranoid Ideation			
pretest	2.04	1.2	1.416
posttest 1	1.24*	0.9	0.867
posttest 2	1.04	0.75	0.741

(table continues)

Dimension	Treatment Group	Control Group	t - Score (treatment/control group means)
Psychoticism			
pretest	1.28	0.9	0.637
posttest 1	0.96	0.7	0.742
posttest 2	0.6^	0.4	0.986

p = 0.05

* statistically significant change from pretest (critical two tailed t = 2.78)

** statistically significant difference (critical two tailed t = 2.36)

^ statistically significant change from posttest 1 (critical two tailed t = 2.78)

Table 3

Brief Symptom Inventory Global Indices Means and t-Scores

Measure	Treatment Group	Control Group	t - Score (treatment/control group means)
Global Severity Index			
pretest	1.564	0.7825	1.741
posttest 1	0.836	0.8225	0.0976
posttest 2	0.696	0.6175	0.374
Positive Symptom Distress Index			
pretest	2.214	1.5125	2.088
posttest 1	1.38*	1.37	0.125
posttest 2	1.22*	1.265	-0.328

(table continues)

Measure	Treatment Group	Control Group	t - Score (treatment/control group means)
Positive Symptom Total			
pretest	36.8	23.75	1.481
posttest 1	32	31.5	0.133
posttest 2	28.8	25.5	0.506

$p = 0.05$

* statistically significant change from pretest (critical two tailed $t = 2.78$)

dimension using the Repeated-Measures t Test. The pretest treatment group mean was 2.578 and pretest 1 treatment group mean was 1.296. This change was significant at $p < 0.05$ (critical two tailed $t = 2.78$). The second posttest (mean = 1.096) and the pretest (mean = 2.578) were also significantly different at $p < 0.05$. The treatment (mean 2.578) and control group (mean = 1.245) also had significantly different pretest at $p < 0.05$ (critical two tailed $t = 2.36$) using the Independent-Measures t Test. One factor that may have accounted for this significant difference is that the treatment group had already been waiting to start the Wellness Program. These individuals may have waited up to six months before they were able to participate in the Wellness Program and as a result some of their symptoms may have exacerbated while they were waiting to attend the program.

The hostility symptom dimension centres around thoughts, feelings, or actions that are characteristic of the negative affect state of anger (Derogatis, 1993). Hostility as measured by the BSI was the second dimension subscale to significantly change over the course of treatment. The treatment group pretest mean was 1.52, the treatment group posttest 1 mean was 0.8 and the treatment group posttest 2 mean was 0.56. Using the Repeated-Measures t Test both posttests were significantly different that the pretest. In addition, the treatment posttests (one and two) were significantly different at $p < 0.05$ (critical two tailed

t= 2.78). This dimension is similar to the dimension described above as the control group had an initial pretest mean (0.55) that was significantly lower than the treatment group using the Independent-Measures t Test.

The third symptom dimension that had a significant reduction for the treatment group was related to paranoid ideation. Paranoid ideation represents paranoid behaviour fundamentally as a disordered mode of thinking. The cardinal characteristics of projective thought, hostility, suspiciousness, grandiosity, centrality, fear of loss of autonomy and delusions are viewed as primary aspects of this dimension (Derogatis, 1993). The first treatment group posttest mean (1.24) was significantly lower that the treatment group pretest mean (2.04) using a Repeated-Measures t Test and setting $p < 0.05$ (critical two tailed t=2.78)

Psychoticism dimension represents items indicative of a withdrawn, isolated, schizoid lifestyle are included in addition to first rack symptoms of schizophrenia such as thought control (Derogatis, 1993). This dimension provides a scale representative of a continuum from mild interpersonal alienation to dramatic psychosis (Derogatis, 1993). The treatment group experienced a statistically significant reduction in symptoms associated with this dimension from posttest 1 (mean = 0.96) to posttest 2 (mean = 0.6). Statistical significance was determined using Repeated-Measures t Test and setting $p < 0.05$ (critical two

tailed t = 2.78). The other symptom dimensions measured for the treatment group remained relatively stable over the course of this study (somatization, interpersonal sensitivity, depression, anxiety and phobic anxiety).

The treatment group subjects also experienced a significant reduction in the average level of distress they experienced as measured by the global Indice: Positive Symptom Distress Index (Derogatis, 1993). There was a statistically significant reduction in the distress measured from pretest (mean = 2.214) to posttest 1 (mean = 1.38) and from pretest to posttest 2 (mean = 1.22) using a Repeated-Measures t Test and setting $p < 0.05$ (critical two tailed t = 2.78). There was also a general decrease noted for the treatment group subjects in the other global indices (Global Severity Index and Positive Symptom Total) the changes were not statistically significant. There were no significant differences between the control and the treatment group on any of the global Indice pretests, posttest 1 or posttest 2 comparisons (critical two tailed t = 2.36).

There was virtually no change for the control group global indices (critical two tailed t = 3.18). In addition the symptom dimensions (somatization, obsessive compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism) for the control group were also relatively stable from pretest to posttest 1 to posttest 2.

The overall changes in the treatment group scores are suggestive that a brief psycho-educational program can decrease psychological distress of the participants.

Question Three

The third question addressed changes that individuals identify in thoughts, feelings and behaviours following a psycho-educational health promotion program. The responses to open-ended question were analyzed to answer this question. All subjects who entered the study had the assumption that the psycho-educational health program would "help" them. In general the subjects believed the program would teach them how to cope better and reduce stress. For example, one program member stated "... Last October I had a panic attack and it turned into a depression. I still feel like it might happen again and I hope this [the Wellness Program] will help me cope better and worry less." When subjects were asked to rate themselves on a scale from 1 to 10, with 1 being not healthy, and 10 being very healthy the treatment group average scores were: pre-test 5.4, post-test one 6.1, and post-test two 7.4. The control group average ratings for how healthy they thought they were are as follows: pre-test 7.8, post-test one 7.4, and post-test two 7.0. Each subject was also asked to describe what being healthy meant to them, however, there was no consistent description. The theme that emerged was that

being healthy meant more than just being physically well. One subject describes this very eloquently: "healthy means an equilibrium in all aspects of your life; emotionally, physically [and] mentally. Harmony." The subjects were also asked to rate their current level of stress on a scale form 1 to 10. One indicated no stress and 10 was as much stress as they could imagine. The treatment group scores were: pre-test 7, post-test one 7.3 and post-test two 3.9. The control group scores were: pre-test 6.6, post-test one 6.4 and post-test two 7.2. The sources of stress were similar for the treatment and the control group. Both groups identified that their sources of stress was their work and their relationships. The sources of stress did not change throughout the course of this study.

The participants were able to identify several changes in their thoughts, feelings and behaviours as the program progressed.

Although the subjects had some difficulty articulating changes in their thoughts, two recurrent themes emerged. One, program participants paid more attention to the nature of their thoughts after being involved in the Wellness Program. One subject described the thinking as "changing", "... I'm catching the automatic thoughts at times, I have discovered sort of where my weak areas are and catch them occasionally so then I try to counteract them in a positive way."

Secondly, program participants generally thought they had a better

understanding of their feelings. For example, one subject describes herself as not worrying about things. She elaborates with "I know that a lot of the things that happened in my life weren't my fault." These two themes did not emerge from the control group responses. There were no recurring themes related to changes in thoughts that emerged from the control group responses.

There was only one theme related to feeling changes that emerged from the treatment group data. This theme related to the self-confidence of the participants of the Wellness Program. There was an increased feeling of confidence which may have enabled the participants of the Wellness group to try some new behaviours in response to some stressful situations. One participant described feeling more confident and so now she is trying new things. Changes in feelings were primarily identified in the first post-test which occurred within 10 days of the Wellness Program ending. There were no reoccurring themes that emerged for the control group.

Several behavioural changes were cited by the treatment group participants. The changes most frequently cited were: being more assertive, taking

more time for themselves and communicating better. These changes were reported in both of the post-test responses. The control group did not report consistent behavioural changes.

All of the treatment group subjects reported at least one aspect of themselves, either thoughts feelings or behaviours, changing since their involvement in the Wellness Program.

Question Four

The final question addressed the effect of a psycho-educational health promotion program on the number of difficult life circumstances as measured by the Difficult Life Circumstances Scale. Difficult life circumstances refer to: regular arguments with a life partner, long-term debts, unemployment, problems with neighbours, problems with alcohol or drugs, victimization by criminals and being abused (sexually, physically and/or emotionally). Barnard et al. (1989) have suggested a score higher than 6 suggested the person may have a greater probability of depression, more physical difficulties, and less social support. Researchers have not yet indicated that scores need to be interpreted differently for

males and females, therefore data have been pooled (5 subjects in the treatment group and 5 subjects in the control group) and subsequently analysed.

The data gathered using the DLC scale was analysed using Repeated-Measures t Test (treatment group compared to treatment group/control group compared to control group) or the Independent-Measures t test (treatment group compared to control group). Means derived from this data are presented in Table 4. Statistical analysis did not reveal any significant changes in the treatment group from pretest to posttest 1 or posttest 2, or between posttest 1 and posttest 2 (critical two-tailed t = 2.78). There were also no significant differences between any of the posttest measures. When the treatment group and the Control group were compared at pretest, posttest 1 and posttest 2 there were not any significant differences (critical two-tailed t = 2.31).

Treatment group pretest DLC scores ranged from 4 to 8. Control group pretest scores ranged from 1 to 7. When the Independent-Measures t-test was conducted the resultant t-score was 2.287. Pretest 1 scores for the treatment group ranged from 1 to 11, the control group scores ranged from 0 to 4. The t-score when comparing the results obtained from the treatment group and the control group was 1.844. Posttest 2 scores between the groups were even more

Table 4

Difficult Life Circumstances Scale Means and t-Scores

Test	Treatment Group	Control Group	t - Score (treatment/control group means)
pretest	6.4	3.4	2.287
posttest 1	5.6	2.2	1.844
posttest 2	4.8	4.4	0.224

$p = 0.05$

* statistically significant change from pretest (critical two tailed $t = 2.78$)

similar. Treatment group scores ranged from 1 to 10 and the control group ranged from 2 to 7. Posttest t-score analysis was 0.224. It is interesting to note that at pretest the groups were the most different. When the specific difficult life circumstances reported by the subjects were analyzed, the treatment group and the control group frequently reported common circumstances that they found difficult. These included: having long-term debts, having been abused physically, verbally or emotionally by their current partner, and having been abused sexually, physically, or emotionally by someone other than their current partner. The treatment group also repeatedly reported: (a) having regular arguments or conflicts with their present partner; (b) feeling as though they did not have enough privacy; (c) having consulted with their children's teacher or other school official because of learning or other school problems; and (d) having a child at home with serious emotional or behavioural problems. The control group, on the other hand, also repeatedly reported: (a) work interference with family life; and (b) having been hospitalized in the past year for accident or illness. The results from the DLC scale will be discussed briefly in the next chapter. It is very interesting that the two groups were quite different at the pretest measure.

Chapter 5

DISCUSSION

Researchers (Pollock, 1984; Pollock, 1986; Pollock, 1989; Pollock, Christian, & Sands, 1990; Pollock & Duffy, 1990) have suggested that health-related hardiness - a combination of control and commitment/challenge - buffers the illness-related effects of stressful life events. Individuals with high levels of health-related hardiness have a general sense of purpose or meaning and see change not as a burden but as a normal part of life (commitment/challenge). They also believe they can influence life events (control). In short, individuals with high levels of health-related hardiness have more resistance to illness and more adaptability if they become ill because they are able to cognitively transform life events to make them less stressful. Although the concept of health-related hardiness is an interesting one, previous research contains significant shortcomings in relationship to using this concept in clinical practice. Therefore, the evaluation of a brief psycho-educational health promotion program was conducted to determine if this type of clinical nursing intervention is useful in fostering thoughts, feelings and behaviours associated with health-related hardiness.

The subjects all lived or worked in rural Alberta and had expressed an interest in participating in the psycho-educational health promotion program.

Wellness Program: A Program on the Basic Life Issues Affecting Health. The majority of the participants were interested in the Wellness Program because it addressed "all aspects of life not just the physical". The majority also anticipated learning more about how to handle stress. All of those people who registered for the Wellness Program and consented to involvement in this research project participated in this study. These people were divided into a control and a treatment group on the basis of space availability and timing (new members were allowed into the program only at the beginning of the first and second sessions).

The treatment group was engaged in the Wellness Program which involved information about the relation of stress to illness, how to manage stress, the actual practice of relaxation, awareness of psychological, spiritual and body responses/sensations, cognitive restructuring, actual practice of communication skills, and information about the relationship between diet and exercise to health. The atmosphere in all sessions was one of fostering mutual aid and warm, supportive, non-confrontative participant interaction. The Wellness Program is "client-centred" and clearly conveys the belief that each person is capable of generating new actions in areas of life with fixed and recurrent problems, and that this exercise of freedom will favourably affect health. Researchers and/or clinicians wanting further information about the Wellness Program may contact the

author. Further information regarding the cost of delivering the Wellness Program may also be obtained by contacting the author. The control group did not receive information provided in the Wellness Program unless similar information was serendipitously provided by their primary health care providers.

In general, the findings of this study suggest that individual changes in levels of commitment/challenge and control are possible with a brief psycho-educational program. Subjects in the treatment group demonstrated cognitive transformation of life events as they experienced a statistically significant decrease in their average level of distress. This was supported by the subjects' answers to the open-ended questions. For example, the treatment group subjects subjectively described several thought, feeling and behavioural changes since participating in a the psycho-educational group. Aspects of change in the commitment/challenge domain can be exemplified by the following open-ended question response: "... [I] have to evolve in all different areas ... physical, spiritual and emotional". This woman was describing her (life) journey in which she combines the familiar and unfamiliar in response to new situations, following an underlying grammar (her own sense of purpose and order) and an evolving aesthetic (her guiding principles related to the art of living). A general sense of purpose and meaning related to being fluid, protean and improvisatory rather than on a struggle toward a single

goal. This protean nature of life exemplifies the belief associated with health-related hardiness, that change is not a burden but a normal aspect of life. Control domain changes are demonstrated by the following subject's response:

> ... for every feeling there is a thought and when I went into the program I was a mess and I feel like I have come out of it, not all the way, but part way. Most of this was due to my feelings so my thinking process had to change so I am keeping on track .... (now) if something happens at home or even at work, I kind of back off and think first without flying off the handle and by not flying off the handle that helps me.

This individual was able to cognitively transform life events and make them less stressful thereby influencing the situation around her.

These two groups (treatment and control) appear to have initially been non-equivalent on four clinically significant characteristics. For example, it is interesting to note that the treatment group had a higher mean Difficult Life Circumstances score (although not statistically significant), a higher mean BSI Obsessive Compulsive Dimension score (statistically significant), a higher mean BSI Hostility Dimension score (statistically significant), and a higher mean Positive Symptom Distress Index score (not statistically significant). These differences may reflect the higher acuity of the participants in the Wellness Program, as many

had been waiting to participate in the Wellness Program (some had been waiting up to five months). The differences between the groups was unexpected.

It was anticipated that those individuals who were in the Wellness Program had relatively low to moderate levels of psychological distress and a low number of difficult life circumstances because most participants were self-referred to the group. Many had become aware of the group through friends, local newspaper articles and ads in the continuing education brochure. Through the collection of data in this research project it is evident that several of the Wellness Program participants are dealing with significant levels of distress. This was demonstrated by the high scores of the BSI and DLC scale. A few of the participants in this study would be more accurately profiled on the BSI if the adult psychiatric inpatient or the adult psychiatric outpatient norms were used rather than the adult nonpatient norms. Over the course of the Wellness Program all of the above mean scores decreased. At posttest 1 and posttest 2 there were no significant differences between the groups. The treatment group mean scores were decreasing and the control group scores were increasing. In future research projects it would be interesting to pretest individuals as soon as they registered for the Wellness Program to determine if "waiting time" is a factor in the deterioration of psychological symptoms, feelings of control and commitment/challenge.

The Wellness Program did not seem to impact individual Health-Related Hardiness Scores. The changes is scores were minimal. However, slight increases were noted in four of the five treatment group subject scores. It is possible that the effect size is small and therefore, many replications of the study are needed to increase the number of people reporting in the treatment and control groups. It is recommended that sample size would need to be approximately 100 if there is a likelihood of detecting a significant difference to a reasonable level. The strength of the intervention may also have been attenuated by the program being too short in session duration or too short on total length. It might be that if the group sessions had lasted longer than 2 hours or that the sessions had continued longer than eight consecutive weeks, there might have been more of a difference between pre- and posttests and between the groups. Both time periods made sense in terms of the amount of information to be conveyed and the duration of other groups described in the literature. That the participants expressed a desire to participate in a "Wellness Group II" indicates that perhaps the group's full value was not reached within the time constraints of this study.

It is difficult to estimate the clinical significance of these small changes in HRHS scores. As of yet, researchers have not indicated norms or Health-Related Hardiness Profiles which could be used to determine the clinical significance of the

increases in HRHS scores. Further research using the HRHS is needed to determine its clinical usefulness. In addition to establishing "norms" for the HRHS the issue of gender differences also needs to be addressed. At this point it is up to the discretion to the researcher whether or not to integrate male and female responses into the data pool. The literature reviewed has not addressed this issue. This researcher is also unable to address the gender issues since there was only one male in the sample. Other than indicating this person's score was comparable to the other subjects, no conclusions can be drawn. Even to indicate that his score was comparable to the others may be misleading to further researchers as it is possible male and female scores may not indicate clinical equivalency.

Changes in psychological variables (BSI Dimensions) related to health-related hardiness are evident from the data in tables two and three. These variables are: Obsessive Compulsiveness, Hostility, Paranoid Ideation and Psychoticism. These variables seem to be indirectly related to the health-related hardiness domain of control. The areas that did not show any significant change (Somatization, Interpersonal Sensitivity, Depression, Anxiety, Phobic Anxiety, Global Severity Index and the Positive Symptom Total) may be a result of psycho-educational health promotional nature of the group or that the group was too short. This could be determined by increasing the sample size and by repeated investigations.

In general, the psychological variables correlated with subjective changes in experiences of control and commitment/challenge reported by the treatment group subjects.

Treatment group subjects noticed they were thinking more positively, feeling more confident and trying new things. These individuals are responding to the challenge of change by fostering the belief that change is an important stimulus to personal development. The program participants are assuming more control of stress in their life by choosing to manage stress in a manner that promotes personal autonomy. Therefore, stress management means interpreting, appraising and incorporating stressful events into their lives. Through the use of coping skills, these individuals are able to achieve what they determine to be desired outcomes in a variety of situations. For example one subject describes "letting people control my life and telling me what to do, the way people try to make me feel, making me do things I wasn't comfortable with but that was the way I had to do it". Through practising of assertiveness and identifying what was important this woman feels more confident about "things being different". The above statement also demonstrates a developing sense of purpose and direction in life and the commitment to exercise these beliefs. This pattern lends support to the idea that a psycho-educational program can impact client symptoms and the control and

commitment/challenge domains of health-related hardiness.

It became evident that "being healthy" had differing meanings for the participants. A consistent theme in the open-ended question responses was that being healthy meant more that just being physically well. For example, one subject wrote "healthy means an equilibrium in all aspects of your life; emotionally, physically [and] mentally. Harmony." This theme may have emerged due to voluntary nature of the group. The research used a convenience sample of those individuals who registered for the Wellness Program. If individuals in other health promotion programs were asked "What being healthy means?" the theme of the responses may be different. Having people in the Wellness Program who believed feeling healthy (healthy meant something different to all subjects) required more than just physical health, made facilitation of the program easier, as such individual participant beliefs seemed to parallel the philosophy and goals that guided the development of the Wellness Program. The subjective and personal experience of health reinforces the multidimensional nature of health-related hardiness. Even though individuals may experience stressful life events, they may use coping strategies related to control or commitment/challenge or some combination to cognitively transform the experience to make it less stressful and subsequently remain healthy.

The DCL scale did not reveal any significant changes at pre- and posttests. It is not surprising that involvement in an eight week program did not effect the number of difficult life circumstances subjects were facing. Despite no significant change in DLC treatment group, subjects were able to interpret, appraise and incorporate the stressful events into their lives, thereby decreasing their general level of distress they experienced. The scores on DLC scale did not relate to HRHS scores or to the BSI scores. Only the existence of difficult life circumstances could be determined by the use of this tool. Since all the participants had difficult life circumstances the usefulness of this measure, in this research study, was limited. Further investigation is needed to determine if this tool would be helpful as a pre-screening tool for the Wellness Program. Gender issues also need to be addressed by the developers of the DLC Scale.

Conclusion

The findings of this research must be placed within the context of the beginning point of an ongoing course of enquiry. Researching clinical interventions using small groups is an area in which the number of available subjects will always be small. Such research needs to be carried out as repeated replications by many researchers in order to have sufficient numbers for statistically valid conclusions. It was in the spirit of offering such a beginning point that this

research project was undertaken.

The value of this study lies in two areas: clinical practice and research. Clinically this project attempts to measure the significance of a specific clinical nursing intervention. As yet, there is no standard evaluation procedure or measurement strategy to assess clinical significance. The treatment group subjects experienced a statistically significant amount of psychological symptom change on several of outcome measures chosen for this research project. While outcome measures are commonly used, other measures are equally important, such as, client reaction to the intervention. The participants in this study were all very positive about their experience in the Wellness Program. Comments on the open-ended questions reflected the participants' desire participate in another group like the Wellness Program.

Despite the positive feedback about the program, there was still an attrition rate of 41%. The participants of the Wellness Program did not incur any financial expenses in order to register and attend the Wellness Program. The total cost of delivering the Wellness Program was paid for by David Thompson Regional Health Authority and the Provincial Mental Health Board. The program content was developed by the leaders of the program and did not bill either the participants of the program, David Thompson Regional Health Authority, or The

Provincial Mental Health Board for program development. Other practising clinicians have suggested that if the participants (when able) were asked to pay a stipend, the attrition rate may be reduced.

The value of this study is that it provides a starting point for research into ways of fostering the development of thoughts, feelings and behaviours associated with health-related hardiness. Little will ever be known about effective interventions if research in this area is avoided because of the difficulties inherent in small group research. If other researchers can replicate this study, perhaps more definitive conclusions can be drawn in relationship to Health-Related Hardiness and health promotion via a psycho-educational group. Furthermore, it is recommenced that the HRHS and DLC be further validated especially in the area of gender specific norms.

Implications

Nursing Practice

As nurses become more involved in the area of health promotion and illness prevention, it is imperative that we understand the factors that influence clients general health. Watson (1985) believes that these factors are: the physical body, thoughts, feelings, goals, desires, past experiences and behaviours. The concept of health-related hardiness incorporates these factors and views them as inner

resources that promote wellbeing. Because individuals who do not have the behavioural or attitudinal attributes of health-related hardiness tend to handle stress poorly, nurses need to be aware that human health-illness experiences are influenced by behaviours, thoughts and feelings. Although it would be premature to implement psycho-educational health promotion programs based on the results of this study, some tentative recommendations for clinical nursing practice are proposed. First, nurses will need to consider the impact clients' experiences of control and commitment/challenge as they deal with life stressors. It is not the number of stressors that is important when determining a treatment plan; it is the subjective experience of the client. Through the use techniques that focus on cognitive transformation of stressful life events, individuals can learn to buffer or decrease the illness-related sequelae. Secondly, nurses need to become familiar with means of promoting feelings of control and commitment/challenge. Specifically, nurses must have clinical competence and a scientific knowledge base in the following areas: developmental conflicts, the mind-body interrelationship, stress management, feeling identification, self-concept, communication skills and group therapy.

Theory

This research project was guided by the work done previously by Pollock (Pollock, 1984; Pollock, 1986; Pollock, 1989; Pollock, Christian, & Sands, 1990; Pollock & Duffy, 1990). For example, decisions were made to include a male in the data pool for the HRHS because this is consistent with research studies completed by Pollock (Pollock, 1986; Pollock, Christian, & Sands, 1990; Pollock & Duffy, 1990). Despite this practice there has not been documented rationale to support grouping male and female data together for analysis. Previous research done by Kobasa (Kobasa, 1979), on which Pollock used to built the concept of Health-Related Hardiness, focused exclusively on males. It may not be appropriate to consider male and female scores of the same numerical value as equivalent since gender issues have not been addressed. Further theoretical development is needed before the HRHS can be used clinically with confidence.

Research

With the completion of this research study several other research questions can be generated. The results of this study suggest that there was a difference between the treatment and the control group related to the acuity level of some symptoms and greater distress which could be, in part, attributable to the necessity of participants to wait for the next Wellness Program. It might be prudent to

pretest individuals as soon as they registered for the Wellness Program. This could be used to help determine if "waiting time" is a factor in the deterioration of psychological symptoms, feelings of control and feelings of commitment/challenge.

Further investigation is also needed to determine if DCL would be helpful as a pre-screening tool for the Wellness Program. It provides only a numerical representation of how many difficult life circumstances people are facing. This tool does not allow the researcher or clinician to determine how effective the client's current coping strategies are. Furthermore, gender issues also need to be addressed by the developers of the DLC Scale.

Health-related hardiness has been found to explain variability to both actual and potential health problems (Pollock, 1989), however, further research using the HRHS is needed to determine its clinical usefulness. At this point "norms" have not been established to determine who could benefit from health-related hardiness interventions. The following questions need to be addressed: What are the "cut off points" for low, medium and high levels of hardiness? What interventions are the most appropriate for individuals with low, medium and high levels of health-related hardiness?

The open-ended questions in this research project provided valuable information regarding the clients' subjective experiences in relationship to changes

in thoughts, feelings and behaviours associated with health-related hardiness. Themes related to the control domain of health-related hardiness emerged repeatedly in subject responses. Themes related to commitment/challenge emerged only occasionally. If these same open-ended questions were used in reference to health-related hardiness again, another question should be added that directly elicits subject responses that focus on perceived changes related to commitment/challenge domain of health-related hardiness.

It is also recommended that sample size be increased to approximately 100 if there is a likelihood of detecting a significant difference to a reasonable level. It may be possible to obtain a sample size of this magnitude if a longitudinal design were used to study the impact of a psycho-educational health promotion program. Once a larger sample size is obtained the author also recommends using analysis of variance and repeated analysis of variance statistical techniques after a Hartley's F-Max test is conducted to determine homoscedasticity.

In conclusion, this study provides a starting point for research into ways to help promote/facilitate thoughts, feelings and behaviours associated with health-related hardiness. Overall, this study indicates that it is possible to help clients begin the process of changing their thoughts, feelings and behaviours using a brief clinical intervention despite the difficult life circumstances remaining the same.

This was evidenced by statistically significant changes in the BSI measures (Positive Symptom Index, Psychoticism, Paranoid Ideation, Hostility and Obsessive Compulsive), as well as the participants subjective descriptions of changes in their thoughts, feelings and behaviours associated with the control and commitment/challenge domains of health-related hardiness.

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Appendix A

The Wellness Program - A Program on the Basic Life Issues Affecting Health

Program Philosophy:

We believe that every person is a unique individual with innate skills and abilities. These skills are modifiable through the process of change.

In the change process, individuals have the right and ability to make informed decisions affecting their health and wellness. These decisions also extend to choosing where to obtain information and choosing their primary health care provider. Therefore, the individual must be given sufficient and appropriate information with which to make informed decisions.

Each individual is a part of the fabric of the society within which he/she lives. Societal attitudes influence an individual's concept of health, response to illness and the type of care he/she may seek.

Health implies a feeling of well-being, the capacity to perform valued tasks, and the ability to adjust and adapt activity to various situations in order to realize maximum potential,

We believe that good health is an objective and subjective assessment which can be defined differently by both the health professional and the client. We believe that for good health, the interrelatedness of physical, mental, emotional, social and spiritual aspects of the individual must be considered.

Life stresses impact the physical, mental, emotional, social and spiritual health of the individual. The individual can transform stressful life events into less stressful forms by optimistic, cognitive appraisals of the change. These appraisals are facilitated by the trait of hardiness. An opportunity for self-development in provided when change occurs and decisive actions are taken.

We believe that the group process in beneficial in assisting individuals to experience a connectedness to others and to have existing beliefs and practices challenges in a supportive environment.

The Wellness Program - A Program on the Basic Life Issues Affecting Health

Program Goals:

1. To assist individuals to respond to the challenge of change by fostering the belief that change is an important stimulus to personal development.
2. To assist individuals to assume control of stress in their life by:
    a) choosing how to manage stress in a manner which will promote autonomy,
    b) exercise cognitive control, thereby interpret, appraise and incorporate stressful events into their lives, and
    c) develop a repertoire of coping skills to be used in a variety of situations to achieve desired outcomes.
3. To assist individuals in developing a strong sense of purpose and direction in life and the commitment to exercise these beliefs.

The Wellness Program - A Program on the Basic Life Issues Affecting Health

Program Objectives:

The individual will:

1. be able to identify the components of wellness;
2. identify the inter-relatedness of mental, physical, emotional, social and spiritual well-being;
3. be able to identify sources and symptoms of stress;
4. identify general methods of coping with stress and change;
5. be able to identify the value and positive components of change;
6. be able to identify the relationship between feelings and the cognitive appraisal of situations;
7. be able to identify our personal attributes and make a commitment to the development of positive self-esteem;
8. be able to identify automatic thoughts which mitigate against the effective cognitive appraisals of life events;

9. be able to exercise cognitive control by restructuring cognitive distortions;
10. be able to identify the role of diet in coping with change and achieving desired outcomes;
11. be able to identify the role of exercise in coping with change and achieving desired outcomes;
12. be able to identify sources of problematic behaviour and codependency;
13. respond to the challenge of these problematic behaviours by incorporating their commitment to overcome these adversities;
14. be able to identify their meaning and purpose in life, their source of hope, their sources of connectedness with others, and their personal value systems;
15. be able to enhance their repertoire of coping skills by identifying problem ownership and utilizing effective communication skills;
16. begin to develop an understanding on their influence through what they say, do and imagine; and
17. be able to apply techniques of assertiveness in anger management and conflict resolution.

Appendix B

Summary of the Workbook Content

Week		*Content*
I	*Introduction*	Table of Contents Introduction - Using the Workbook Course Outline Getting Started: YOU!
	Morning Log	Morning Log: Instructions Exercise Sheet Affirmation: Eda F. Teixeira
	Coping with Stress	Definition of Stress Positive and Negative Stress Sources of Stress Stress Symptoms My Stress Response Sources of Stress Managing Stress Short Term Ways to Handle Stress Long Term Ways to Handle Stress Self Talk Relationships Stress Cycle Life Style Scale Stress Action Plan Responsibility Handling Stress: What Works For You Laughter: The Best Medicine To Laugh of Not to Laugh

Summary of the Workbook Content

(continued)

Week	*Content*	
I (continued)		
	Relaxation Exercise	Deep Muscle Relaxation
II	*Feelings*	I Feel ... I Am How Do You Feel Today? Feelings
	Journal Writing	The Write Thing - Journaling Journal Guide
	Self Esteem	Who am I? My Ideal Self Realizing and Accepting Who You are Inside and Out I'm Special
	Relaxation Exercise	Your Special Place

Summary of the Workbook Content

(continued)

Week		*Content*
III	*Controlling Our Thinking*	Thoughts/Feelings/Problems Motto Automatic Thoughts Identifying Automatic Thoughts Daily Record of Automatic Thoughts and Reactions Mary's Automatic Thoughts My Automatic Thoughts Affirmation: Abraham Lincoln Identifying Automatic Thoughts Advantages and Disadvantages of Automatic Thoughts Evaluating Automatic Thoughts
	Exercise	This Week's Exercise Assignment Health Benefits of Physical Activity Affirmation: Hypocrites Anonymous Sensible Shoes: Choosing the Right Exercise Shoes Fitness Injury Prevention: Tips for Exercising Safely How to Begin Your Exercise Program Take the Time: A Guide to Fitness for the Working Woman Physical Fitness and Your Heart Exercise and Your Heart Walking: The Activity of a Lifetime What is Fitness: Your personal Plan for Total Fitness
	Relaxation Exercise	Tai Chi

Summary of the Workbook Content

(continued)

Week		*Content*
IV	*Controlling Our Thinking*	(no new material distributed)
	Personal Goals	Personal goals A Goal A Desire If Only
	Relaxation Exercise	instrumental musical selection (Bekker H (1989) Stream of Dreams produced by G. Gibson and published by Solitudes)
V	*Dealing with Issues and Problems*	Affirmation: Anonymous Possible Results of Painful Family Systems Personal Appraisal Roles in Families Affirmation: Fredrick Wilcox Personal Goals
	Spiritual Wellness	Spiritual Wellness Components Spiritual Health Worksheet Dealing with Guilt Developing Spirituality
	Relaxation Exercise	Benson's Relaxation Method (practiced for 15 minutes)

Summary of the Workbook Content

(continued)

Week		*Content*
VI	*Interpersonal Problems and Communication*	Affirmation: Confucius Who Owns the Problem I-Messages Attentive Listening My Plan for Improving My Relationships
	Relaxation Exercise	Ericksonian Relaxation Technique (practiced for 15 minutes)
VII	*Assertiveness*	What is Assertiveness? Everybody's Bill of Rights Assertive Behavior Something to Keep in Mind How To's: Skills to Become Assertive Skills for Saying No Behavioral Responses Consequences of Three Behavior Response Styles Assertive Training Checklist Assertiveness Exercises Assertiveness Needs Assessment Assertiveness Log Book

Summary of the Workbook Content

(continued)

Week	*Content*
VII (continued)	
Dealing with Anger and Conflict Resolution	Review the Causes of Anger Symptoms of Anger Ways People Deal With Anger Dealing with Anger What to Do When you are Angry Anger Situation Work Sheet The Creative Time-Out Take Action Releasing Your Anger Will Do The Following When Your Anger is a Problem Conflict Resolution In Action
Relaxation Exercise	Poem "Listen"

Summary of the Workbook Content

(continued)

Week		*Content*
VIII	*Healthy Eating*	Daily Food and Activity Record Commonly Asked Questions About Cholesterol Food Track Canada Food Guide Using the Food Guide The Vegetarian Food Pyramid Nutrition Labeling Using Food Labels Test Your Fat I.Q. Nutrition: The Ins & Outs Enjoy Beef: The low fat way. Calcium for Life Eat Well, Live Well Foods that Boost Your Moods Why Women Need Chocolate Migraine Diet
IX	*Meal Management on a Budget*	How to Eat a Healthier Way Eating Value for Your $ Eating Well for Less
	Budgeting	

Appendix C

Background Information Sheet

1) Your Age (in years) _____

2) What is your gender

Male Female

3) Are you involved in a long-term relationship?

yes no

If yes, for how long (in years): _____

4) Education (highest level completed)

Junior High _____ High School _____

Trade/Technical School _____ College/University _____

5) Employment Status

Full-time ____ Part-time ____ Retired ____

Student ____ Not working outside the home ____

6) Occupation _____

7) Born in Canada? Yes No

If NO, where were you born? _____

how long have you been in Canada? _____

8) In the past year have you used any of the listed services? If so, about how many times?

	No	Yes	Number of Times
at a medical clinic	___	___	___
at a hospital	___	___	___
at mental health	___	___	___
from a chiropractor	___	___	___
from a nurse	___	___	___
from a physiotherapist	___	___	___
from a naturopath	___	___	___
from a message therapist	___	___	___
other _____	___	___	___

9) What health services are you currently using?

_____
_____
_____
_____
_____

10) Are you currently living with a chronic condition that effects your health?

Yes No

If yes, what is it?

_____
_____
_____
_____

11) Are you taking any prescribed medication?

Yes No

If yes, what?

_____
_____
_____
_____
_____

12) Are you on a special diet?

Yes No

If yes, please tell me what it is?

_____
_____
_____
_____

Thank You

APPENDIX D

Open-Ended Questions

Before Group Begins:

Treatment Group and Control Group

1) What interests you about this group?

2) Do you think this group will help you?

If so, how?

3) What does being healthy mean to you?

4) How would you rate yourself if on a scale from 1 to 10,

if 1 = not health and 10 = very healthy?

1	2	3	4	5	6	7	8	9	10
not healthy									very healthy

5) What do you do to stay as healthy as you are?

6) How would you rate the current level of stress in your life if on a scale from 1 to 10, if 1 = no stress and 10 = as much stress as you can imagine?

1	2	3	4	5	6	7	8	9	10
no stress									the most stress imaginable

7) What are your sources of stress?

Immediately after Eighth Session

or Eight Weeks After Initial Testing

Treatment Group

1) Have you noticed changes in yourself (thinking, feeling, behaving, etc.) or in your Life Style since starting the program? If you have what changes have you noticed?

2) What does being healthy mean to you?

3) How would you rate yourself if on a scale from 1 to 10, if 1 = not health and 10 = very healthy?

1	2	3	4	5	6	7	8	9	10
not healthy									very healthy

4) What do you do to stay as healthy as your are?

5) How would you rate the current level of stress in your life if on a scale from 1 to 10, if 1 = no stress and 10 = as much stress as you can imagine?

1	2	3	4	5	6	7	8	9	10
no stress									the most stress imaginable

6) What are your sources of stress?

Control Group

1) Have you noticed changes in yourself (thinking, feeling, behaving, etc.)

or in your Life Style since the last time you answered this question?

If you have what changes have you noticed?

2) What does being healthy mean to you?

3) How would you rate yourself if on a scale from 1 to 10,

if 1 = not healthy and 10 = very healthy?

1	2	3	4	5	6	7	8	9	10
not healthy									very healthy

4) What do you do to stay as healthy as your are?

5) How would you rate the current level of stress in your life if on a scale from 1 to 10, if 1 = no stress and 10 = as much stress as you can imagine?

1	2	3	4	5	6	7	8	9	10
no stress									the most stress imaginable

6) What are your sources of stress?

At Follow-up Session (Approximately 12 weeks later)

Treatment Group

1) Have you noticed changes in yourself (thinking, feeling, behaving, etc.)

or in your Life Style since the program ended?

If you have what changes have you noticed?

2) What does being healthy mean to you?

3) How would you rate yourself if on a scale from 1 to 10,

if 1 = not health and 10 = very healthy?

1	2	3	4	5	6	7	8	9	10
not healthy									very healthy

4) What do you do to stay as healthy as your are?

5) How would you rate the current level of stress in your life if on a scale from 1 to 10, if 1 = no stress and 10 = as much stress as you can imagine?

1	2	3	4	5	6	7	8	9	10
no stress									the most stress imaginable

6) What are your sources of stress?

Control Group

1) Have you noticed changes in yourself (thinking, feeling, behaving, etc.)

or in your Life Style since the last time you answered this question?

If you have what changes have you noticed?

2) What does being healthy mean to you?

3) How would you rate yourself if on a scale from 1 to 10,

if 1 = not health and 10 = very healthy?

1	2	3	4	5	6	7	8	9	10
not healthy									very healthy

4) What do you do to stay as healthy as your are?

5) How would you rate the current level of stress in your life if on a scale from 1 to 10, if 1 = no stress and 10 = as much stress as you can imagine?

1	2	3	4	5	6	7	8	9	10
no stress									the most stress imaginable

6) What are your sources of stress?

Appendix E

Overview of Treatment Group Data Collection Procedures

Time:	Data Collection:
First session of program	- Background Information Sheet - Open-ended questions (pen and paper responses) - Health-Related Hardiness Scale (Pollock, 1990) - Brief Symptom Inventory (Derogatis & Melisaratos, 1983) - Difficult Life Circumstances Scale (Barnard, 1989)
After completing the Wellness Program	- Open-ended Questions (semi-structured interview) - Health-Related Hardiness Scale (Pollock, 1990) - Brief Symptom Inventory (Derogatis & Melisaratos, 1983) - Difficult Life Circumstances Scale (Barnard, 1989)
12 weeks after program completing the program	- Open-ended questions (pen and paper responses) - Health-Related Hardiness Scale (Pollock, 1990) - Brief Symptom Inventory (Derogatis & Melisaratos, 1983) - Difficult Life Circumstances Scale (Barnard, 1989)

Appendix F

Overview of Control Group Data Collection Procedures

Time:	Data Collection:
At a time convenient to the individual on waiting list	- Background Information Sheet - Open-ended questions (pen and paper responses - Health-Related Hardiness Scale (Pollock, 1990) - Brief Symptom Inventory (Derogatis & Melisaratos, 1983) - Difficult Life Circumstances Scale (Barnard, 1989)
2 months after completing initial tests	- Open-ended Questions (pen and paper responses) - Health-Related Hardiness Scale (Pollock, 1990) - Brief Symptom Inventory (Derogatis & Melisaratos, 1983) - Difficult Life Circumstances Scale (Barnard, 1989)
20 weeks after program completed initial testing	- Open-ended Questions (pen and paper responses) - Health-Related Hardiness Scale (Pollock, 1990) - Brief Symptom Inventory (Derogatis & Melisaratos, 1983) - Difficult Life Circumstances Scale (Barnard, 1989)

Appendix G

Information Letter

Hello:

My name is Cheryl Webster. I work Community Mental Health Services in Rocky Mountain House and am a student in the Masters in Nursing Program at the University of Alberta. I will be asking people who are registered for the Wellness Program to be involved in a research study. The purpose of this study is to understand if the Wellness Program impacts people's behaviors, thoughts and/or feelings.

<u>If You are in the January Wellness Program:</u>

When the Wellness Program starts I will be asking everyone to fill out 5 short forms. When the program ends I will be asking everyone to fill out 3 more forms. I will also be asking to meet with you, so we can complete one of the forms together. This will most likely take about 30-40 minutes of your time. These answers will be taped. The answers will then be typed up. About 3 months after you finish the Wellness Program I will ask you to fill out 4 forms again. Each time you fill out the forms it will take about 40 minutes.

You may phone me during or after the study with any questions or concerns you have at 845-8300.

<u>If You are waiting for the next Wellness Program:</u>

I will be asking you to fill out the same forms. About 2 months after filling out the first set of forms I will be asking you to fill out a few more forms. About 3 months later I will ask you to fill out the same forms. Each time you are asked to fill out the forms they will take about 40 minutes of your time to finish.

All of the answers and comments to the questions asked will be kept strictly confidential. Your participation is voluntary and if you wish to drop out of the study at any time you may of course, do so freely.

If you would be willing to be involved and/or if you have any questions about this study, please contact me by telephone at 845-8300 or let me know at the first session of the Wellness Program. My supervisor at the Faculty of Nursing is Professor Wendy Austin, and you may also talk to her with any questions or concerns at 492-5250.

Thank you very much for your interest. Your participation in this study may help us gain a better understanding of how to provide helpful information to others.

Kindest regards,

Cheryl Webster
Dipl.Psych.Nurs., R.N. B.Sc.N.

Appendix H

Consent Form

Project Title:

The Impact of a Psycho-Educational Program on Clients' Symptoms and Health-Related Hardiness

Researcher:

Cheryl Webster, Dipl.Psych.Nurs., R.N., B.Sc.N.
Community Mental Health Services
Rocky Mountain House
Phone: 845-8300

Supervisor of Researcher:

Wendy Austin R.N., M.Ed., PhD (candidate)
Professor of Nursing
University of Alberta
Edmonton Alberta
Phone: 492-5250

WHY AM I DOING THIS STUDY

I believe that the findings from this study will help me understand if the Wellness Program impacts people's behaviors, thoughts and/or feelings.

WHAT YOU WILL BE EXPECTED TO DO

<u>If You are in the January Wellness Program:</u>

When the Wellness Program starts you will be asked to fill out 5 short forms. When the program ends you will asked to fill out 3 more forms. I will also be asking to meet with you, so we can complete one of the forms together. This will most likely take about 30-40 minutes of your time. These answers will be taped. The answers will then be typed up. About 3 months after you finish the Wellness Program you will be asked to fill out 4 forms again. Each time you fill out the forms it will take about 40 minutes.

If You are waiting for the next Wellness Program:

You will be asked to fill out the same forms. About 2 months after filling out the first set of forms you will be asked to fill out a 4 of the forms again. You do not need to meet with me for an interview. About 3 months later, you will be asked to fill out the same forms. Each time you are asked to fill out the forms they will take about 40 minutes.

VOLUNTARY PARTICIPATION

I would like you to assist me by participating in the study. I also want you to know that you do not have to be in this study if you don't want to. If you decide to participate in the study you can drop out at any time just by telling one of the group leaders. No one will hold it against you if you decide to drop out. If you are currently working with your regular health care provider your care won't change because you are or aren't in the study.

CONFIDENTIALITY

If you decide to be a part of this study your name and what you say and do will be kept confidential. Your questionnaires and records will not be marked with your name but only with a number. The tape of the form we filled out together will be kept in a locked cabinet. If your name is mentioned on the tape, your name will not be included in the typed up answers. Your regular health care provider (doctor, nurse, psychologist, chiropractor, etc.) will not see or hear about your personal records from this study, unless you, yourself, wish to speak to them about your experiences.

If your personal records are for a purpose that is different that the one talked about in this consent, the researcher will get ethical approval according to usual agency procedure before beginning. It is the policy of the University of Alberta that the data be stored for at least 7 years. The data will be stored in a locked cabinet which only the researcher can unlock.

When the results of this study are completed, I plan to publish the results in scientific journals and to present the findings to other health care professionals. I want you to know that when I do this I will not identify you in my talks or writing.

RISK/BENEFIT

It is hoped that you will learn new ways of promoting healthy living during the program. When people start to look at their lives they may feel things they did not realize were there. Sometimes these are pleasant, but sometimes they are not. It you were to experience any distress you may talk to the researcher, her supervisor, or one of the group leaders. They will give you a list of agency telephone numbers to call to get extra support. If you like one of the group leaders can help you do this.

If you have questions later, you can contact either the researcher or her supervisor.

PARTICIPANT'S STATEMENT

I have read this information and give my consent to be involved in the study titled "The Impact of a Psycho-Educational Program on Clients' Symptoms and Health-Related Hardiness"

_____ _____

signature of participant date

_____ _____

witness date

APPENDIX I

List of Resources

Alberta Hospital Ponoka
Crisis Number: 1-800-779-5057

Rocky Mountain House General Hospital
Rocky Mountain House
Telephone: (403) 845-3347

Rocky Mountain House Medical Clinic
Rocky Mountain House
Telephone: (403) 845-2815

Community Mental Health Services
Rocky Mountain House
Telephone: (403) 845-8300

West Country Family Services
Rocky Mountain House
Telephone: (403) 845-2033

Central Alberta Women's Emergency Shelter
Red Deer
Telephone: 845-4141 (direct line from Rocky)
(403) 346-5643

List of Resources
(continued)

Rocky Native Friendship Centre
Rocky Mountain House
Telephone: (403) 845-2788

Murphy Counseling
Rocky Mountain House
Telephone: (403) 845-7277

Canadian Mental Health Association
Red Deer
Telephone: (403) 342-2266

AADAC
Red Deer
Telephone: 340-5274